

RESEARCH IDEAS ON RESPIRATORY CONDITIONS & TOBACCO DEPENDENCY ABSTRACTS

RI01. Beliefs and behaviour towards chronic lung disease - a mixed-method FRESH AIR study

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Research Question: What beliefs, perceptions and behaviours towards chronic lung disease (CLD) can be identified in diverse low-resource settings?

Background: The greatest burden of CLD occurs in low-resource settings, while these settings are seriously under-represented in current scientific research. When implementing evidence-based interventions from high-resource settings in low-resource settings, knowledge of local cultural contexts is required. This will help to tailor the implementation of CLD-interventions to the local context and hence, enhance success.

Possible Methodology: This is a sub-study of the European Horizon 2020 project 'FRESH AIR', conducted in four diverse settings in Uganda, Vietnam, Greece and Kyrgyzstan. This sub-study is both qualitative and quantitative (mixed-method) and observational.

First, qualitative data are collected in each setting using interviews, observations, focus groups and questionnaires through the Rapid Assessment method. A theoretical framework adopted from the Explanatory Model, Health Belief Model and Theory of Planned Behaviour is used to guide the research tools and analysis.

Subsequently, a quantitative survey of beliefs and behaviours regarding CLD is conducted at 1000 randomly selected community members and 200 healthcare professionals. The survey is based on various validated questionnaires (e.g. the Illness Perception Questionnaire), and complemented with input from the qualitative data collection. A pilot version has been run in the Netherlands and in each participating country. The final version has been translated and back-translated in the most commonly read language for each setting (Lusoga, Vietnamese, Greek and Russian respectively). Descriptive statistics will be performed to discover the frequency of prevalence of beliefs and behaviours towards CLD.

Questions to Discuss: Besides performing descriptive statistics, would it be feasible to explore relations between beliefs and behaviours per setting, in particular using path analysis?

Would it make sense to accumulate results of all countries to find a general relation between beliefs and behaviours in low-resource settings?

Declaration of Interest: None

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RI02. Clinical characteristics and outcomes in a high risk asthma patients real-life population defined by an inhaled bronchodilators misuse/abuse

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Research Question: To identify the different clinical characteristics and outcomes, including hospitalizations, exacerbations and side effects, associated with misuse/overuse of rescue inhaler bronchodilators (IBD) in real-life asthma patients.

Background: Inhaled corticosteroids (ICS) are the cornerstone in the treatment of asthma. LABA in combination with ICS are proposed by guidelines in the step-up approach for asthma treatment, but they should never be prescribed without ICS. SABA are effectively used in the treatment of acute symptoms and exacerbations but their overuse is related to poor asthma control. However, many patients manage their symptoms and try to control their disease exclusively with IBD and this strategy have been proved to deal to increase a high risk of poor control, exacerbations, hospitalizations and even increased mortality. Population studies show that there is a high proportion of asthma patients who continue to misuse/overuse SABA and LAMA. No many data still available about the possible differential characteristics of this group of asthmatics and the possible areas of improvement and interventions to reduce the IBD misuse/overuse.

Possible Methodology: Observational prospective cohort study in primary care real-life based in the existing cohort MAJORICA with more than 45.000 older than 18 years patients from the Balearic public health system. Patients getting any IBD in the previous 2 years will be included. We will identify the group of patients making a IBD misuse/overuse. Sociodemographic and clinical variables such as age, gender, tobacco exposure, BMI, co-morbidities, pulmonary function, asthma control, respiratory medications, vaccinations, sanitary resources use, exacerbations and hospitalizations will be collected and compared between the misusers/over-users group and the control group to identify the differential characteristics of the first group.

Questions to Discuss: The definition of the misusers/over-users group will be difficult to stablish because there are no previous reports trying to identify this specific group. Number of cans/year, concomitant ICS use, LABA abusers...

The best desirable study period is still not clear for the researchers.

The use of population cohorts with real-life practice information has its own limitations that could make it difficult to analyse. We would like to discuss how to reduce these limitations.

Declaration of Interest: MRR and ML have received grants from different pharma companies to attend conferences or to speak at educational activities

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RI03. Epidemiological features and economic burden of COPD in Vietnam – a FRESH AIR study

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Research Question: What is the prevalence of chronic obstructive pulmonary disease (COPD) and exposure to its risk factors in Vietnam and what is the clinical and economic burden?

Background: This is a sub-study of the European Horizon 2020 project 'FRESH AIR', an implementation science project targeting chronic lung disease in Uganda, Vietnam, Greece and Kyrgyzstan.

The limited data on epidemiological features of COPD in Vietnam suggest a high clinical and economic burden of COPD. The economic impact for non-communicable diseases in general seems to be silently rising. Indirect costs may be particularly of high significance in low-resource settings, as most patients belong to the working age population that normally contributes most to society. Elucidating and generating epidemiological and economic data helps to guide cost-effectiveness evaluations of future (FRESH AIR) interventions. This can fuel decision making in policy- and health interventions, contributing to improvement of lung health.

Possible Methodology: First, existing data on the prevalence of COPD and exposure to its risk factors will be identified by a literature search and publicly available sources. In addition, primary data in a representative national sample of COPD patients will be collected. The approach to estimate the economic burden will be primarily bottom-up. All healthcare utilisation will be calculated per category (e.g. hospital, primary care, medication) and thereafter summed up and analysed. Patients from five hospitals (190 inpatients, 300 outpatients) will be interviewed on exposure to risk factors of COPD, as well as impairment of work- or other activities (e.g. housework, school attendance) due to COPD. Structured interviews using standard questionnaires (EQ-5D, CCQ, mMRC, WPAI) will be conducted, permitting quantitative data analysis.

Questions to Discuss: How can data on exposure to COPD-risk factors in COPD-patients contribute to exploring the national exposure?

Declaration of Interest:

None

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RI04. Identification of blood eosinophils cut-off points to identify differential clinical outcomes in a COPD real-life population

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Research Question: To explore the optimum cut-off points of blood eosinophils, measured in stable condition, that are able to identify differential clinical outcomes in a primary care real-life COPD population

Background: Blood eosinophils have been identified as a potential biomarker to assess exacerbation risk. High eosinophil counts have been proposed as a surrogate marker of response to ICS. However, different cut-off values (as 200, 300, 400 cells / μ L and else, or percentage of all white cells 2%, 3%, 4%, 5% or else) have been suggested. These thresholds were mostly based on observations in selected trial populations. In the broader, heterogeneous real-life COPD population, more variability may exist. Also the value of blood eosinophils in specific subgroups, such as non-smokers, either ex-smokers or never-smokers, is unclear.

Possible Methodology: Retrospective real-life population cohort using the MAJORca Real-life Investigation in COPD and Asthma (MAJORICA) cohort (>70.000 patients) that was enriched with routine lab data including blood eosinophils (% and counts), fibrinogen, CRP and IgE during 2015. In the main analyses, all patients older than 18 years who had received a physician-confirmed diagnosis of COPD (International Classification of Diseases, 9th revision [ICD-9] codes: 491, 492, and/or 496) and/or asthma (ICD-9 code: 493) were included obtaining three different groups: COPD, Asthma and ACOS. All these patients were required to have at least a blood eosinophil count measurement in 2014 and 2015. The values coming from a hospitalization period (1 week before and after hospitalization) were excluded. The maximum and median eosinophils values for the three different groups in stable condition were calculated. All outcomes will be reported in the three populations defined above (COPD, ACOS and asthma). Maximum and median blood eosinophil count over 2 years will be calculated and by using receiver operating characteristic (ROC) curves we will identify the optimal cut-off eosinophil value to predict respiratory hospitalization. We will also investigate inflammatory patterns, socio-demographic and clinical characteristics.

Questions to Discuss: Will we get the real stable condition measurements by excluding the values coming from peri-hospitalization periods (1 week before and after)?

Which measurement will be better to consider for the analysis: maximum or median eos count?

Should we search for other possible causes of eos elevation during the study period?

Declaration of Interest: All the authors have received grants from different pharma companies to attend conferences or to make lectures in educational meetings

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RI05. Timely detection of Chronic Obstructive Pulmonary Disease in primary health care

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Research Question: What is the patients' benefit of making an early COPD diagnosis?

Background: An important problem of COPD remains its widespread under-recognition. The reasons for this are scarce and only suggestions have been made, being a limited access to spirometry one of the most defended.

Guidelines have highlighted the interest in COPD active search. However, there is no agreement on how to perform it. In order to optimise the use of spirometry, screening tools (questionnaires, mini-spirometers) have been developed to select high risk patients that should be subjected to spirometry.

While screening with spirometry alone is controversial, screening for a proper diagnose of COPD seems not. Many authors have been trying to demonstrate the benefits of COPD early identification. These projects have, however, methodological limitations and should be looked upon carefully. Also, many of the benefits proposed for COPD early detection may not be dissociated from smoking cessation, making it difficult to distinguish screening vs smoking cessation effects.

Possible Methodology: This project will be organised in four work packages. Firstly, an extensive literature review about the issues in hand will be made. The second and third phases will use the same methodology. Patients will be evaluated with the screening tools and spirometry. A screening study to discover undiagnosed COPD cases will be performed. At the same time, the author proposes to validate these screening tools in Portuguese primary care units. At last, a cohort study – comparing COPD patients diagnosed from screening and case finding - will be developed to understand how beneficial it may be to make an early COPD diagnosis.

Questions to Discuss:

How feasible is the cohort study?

How long will it take to produce significant results?

How many patients should be involved?

Which variables should be studied?

Declaration of Interest: The authors declare to have no conflict of interests for this project implementation.

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RI06. TiTAN Greece & Cyprus – Primary Care Tobacco Treatment Training Network in Greece & Cyprus

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Research Question: Can a program to support primary care providers with delivering evidence-based smoking cessation treatment be successfully disseminated in Greece and Cyprus?

Background: Smoking rates in Greece are among the highest in all of Europe and responsible for a large burden of respiratory and other illnesses. Primary care providers are not intervening with patients at optimal rates. The TiTAN project will provide leadership and coordination for the dissemination of both a professional training program and practice tools that are tailored to support busy primary care providers.

Possible Methodology: Population: The TiTAN-Greece & Cyprus Project will training 300 PHC providers (family medicine residents, PHC nurses, allied health professionals) in four geographic regions in Greece and Cyprus.

Description of the Intervention: The specific objectives of the TiTAN program are to: 1) disseminate a high-quality tobacco dependence treatment training program to PHC providers based on guidelines of best practice; 2) disseminate a tool kit of patient/provider resources to support integration of tobacco treatment into PHC settings; 3) provide outreach and booster education to the network of PHC providers.

Research Methods: A pre-post evaluation (n=300) will be used to examine the impact of the program on: i) provider attitudes, knowledge, intentions; and ii) rates of evidence-based tobacco treatments (5As) delivery. We will randomly select a sub-sample of providers (n=20) and will survey patients (n=800) from their practice in order to validate changes in 5As delivery.

Funding: This project is funded by the Global Bridges: Healthcare Alliance for Tobacco Dependence Treatment through a Pfizer Independent Grants for Learning and Change.

Questions to Discuss:

What are the main barriers to delivering tobacco treatment in primary care settings?

What are the evidence-based techniques used by the TiTAN Greece & Cyprus network?

Declaration of Interest:

S. Papadakis is a co-inventor of the Ottawa Model for Smoking Cessation.

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RI07. Unexplained reduced mortality in COPD patients with gastro-oesophageal reflux (GORD): a retrospective observational study using routine electronic health data

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Research Question: Can the reduced all-cause mortality observed in COPD patients who have co-morbid GORD be explained by medications used to treat GORD?

Background: Using individual patient-anonymised records in the Hampshire Health Record Analytical database (HHRA), an NHS database with linked routine primary and secondary care data for over 1.4 million patients, we identified a prevalent cohort of 16,479 patients with a primary care diagnosis of COPD as at 01/01/2011 and studied the effect of comorbidity on outcomes over 3 years (2011-2013). 1791 patients (10.9%) had a pre-existing diagnosis of GORD (one of nineteen comorbidities studied). After adjusting for possible confounding factors (age, sex, deprivation indices, smoking status, BMI, FEV₁ %predicted, inhaled medication, number of comorbidities) the hazard ratio for all-cause mortality over 3 years was 0.77 (95%CI: 0.66-0.91, p=0.001) in those with comorbid GORD compared to those without. Our hypothesis is that medication used to treat GORD might have some protective effect in patients with COPD, possibly via anti-inflammatory activity.

Possible Methodology: Focussing on proton pump inhibitors (PPIs), we will compare all-cause mortality in the following analyses: (a) patients with GORD versus those without GORD; (b) patients prescribed PPIs versus those not prescribed PPIs; (c) patients with GORD prescribed PPIs versus patients with GORD not prescribed PPIs; (d) Patients without GORD prescribed PPIs versus patients without GORD not prescribed PPIs.

Questions to Discuss:

1. What other factors might explain the apparent protective effect of GORD on all-cause mortality?
2. Should we consider other second-line GORD medications in our multivariate analyses?
3. Should we consider medications with anti-inflammatory properties prescribed for other comorbidities, such as statins?

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RI08. Usefulness of Lung Function Questionnaire in early detection of chronic obstructive pulmonary disease

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Research Question: Usefulness of Lung Function Questionnaire in early detection of chronic obstructive pulmonary disease.

Background: Chronic obstructive pulmonary disease (COPD) used to be a rapidly progressive chronic disease, mainly poor response to the treatment. But in the recent years new findings have been introduced. To slow down its progression several measures must be done, namely smoking cessation, pulmonary rehabilitation and medication. Most important is to diagnose COPD in early state before subsequent damage is done. Spirometry is a golden standard for diagnosing COPD, but its weakness is that is not very practical. Implementation of spirometry for all smokers would be time consuming, expensive and difficult to handle for healthcare workers.

COPD Assessment Test (CAT) questionnaire is frequently used to evaluate COPD stability and patients' quality of life opposite to the Lung Function Questionnaire (LFQ).

Possible Methodology:

Place of research: Primary health center Litija, Slovenia.

Subjects: smokers and former smokers, age 30 and over, the pattern includes 100 subjects.

Exclusion factor: Patients diagnosed with asthma, already diagnosed COPD patients, patients with acute respiratory infection, younger smokers, patients with contraindication for spirometry.

Process of research and gathering data: Smokers who are willing to participate are going to fill up adapted LFQ. LFQ is a short 10 question questionnaire about subjects' physical appearance, smoking habits, physical symptoms and signs. We will score LFQ. Gathered 16 points and more (scale from 0 to 38 points) show moderate and high probability to have COPD. Gathered 15 points and less show low probability to have COPD. Later subjects will also do the spirometric test.

Instruments: In this research adapted Lung Function Questionnaire (LFQ) will be used. LFQ is being developed as a case finding tool to identify patients who are appropriate for spirometry testing to confirm the diagnosis of COPD.

Data analysis: Scored questionnaires and spirometry data will be compared and statistically processed.

Questions to Discuss:

What is sensitivity and specificity of LFQ?

How successful is LFQ in finding COPD?

Does it make sense to introduce LFQ in daily practice in a family medicine offices?

Declaration of Interest: No conflicts of interests.

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