

Abstract P242 Table 1 Summary statistics from the fitted model and comparisons between chronic cough patients and healthy volunteers are presented below as adjusted geometric means and the pairwise differences ratios of the adjusted means

| C ₅ Capsaicin Concentration – Adjusted Means and Difference Ratios between Subject Types | | | | | |
|---|---------------------------------|------------------------------|---|------------|------------------|
| | Chronic Cough Patients (N = 10) | Healthy Volunteers (N = 12) | Chronic Cough Patients vs. Healthy Volunteers | | |
| | Adjusted Geometric Mean (μM) | Adjusted Geometric Mean (μM) | Geometric Mean Ratio with 95% CI | | pairwise p-value |
| Overall | 35.2 | 77.4 | 0.46 | 0.20, 1.09 | 0.078 |
| By Infusion Type | | | | | |
| Acid | 29.5 | 83.8 | 0.36 | 0.15, 0.88 | 0.025 |
| Saline | 41.8 | 71.4 | 0.42 | 0.20, 0.87 | 0.019 |
| By Infusion Type and Order | | | | | |
| Acid | | | | | |
| Acid-Saline | 20.0 | 114.3 | - | - | - |
| Saline-Acid | 43.5 | 61.3 | - | - | - |
| p-value | 0.039 | 0.367 | - | - | - |
| Saline | | | | | |
| Acid-Saline | 30.8 | 105.4 | - | - | - |
| Saline-Acid | 56.7 | 48.3 | - | - | - |
| p-value | 0.245 | 0.167 | - | - | - |

#Ratio <1: Chronic Cough Patients required lower concentrations than Healthy Volunteers.
Ratio >1: Chronic Cough Patients required higher concentrations than Healthy Volunteers

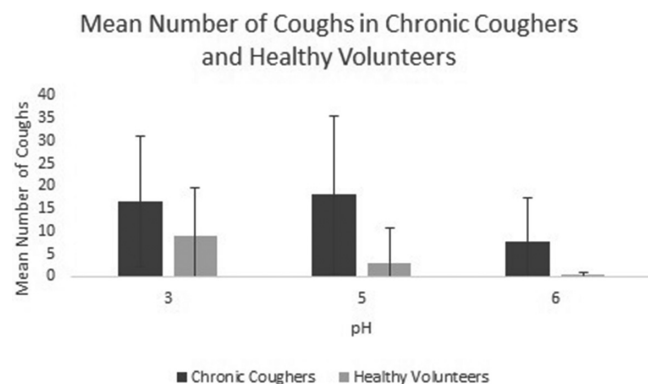
P243 ASSESSING THE EFFECT OF PH ON CITRIC ACID COUGH CHALLENGES IN CHRONIC COUGH PATIENTS AND HEALTHY VOLUNTEERS

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10.1136/thoraxjnl-2015-207770.379

Introduction Citric acid has been used for over 6 decades in cough challenge studies, however despite this, the mechanism of its tussive effect is still not fully understood. We assessed the cough response to citric acid solutions, at different levels of acidity (pH) to determine what role this plays in the induction of cough. Healthy volunteers and chronic cough patients were compared.

Methods 20 chronic cough patients and 20 healthy volunteers were recruited and underwent three cough challenges at 48 h apart. Each visit involved 5 repeated inhalations of a 300 mM citric acid solution. Whilst the concentration of the citrate cation was kept constant, the pH was varied by titration with sodium hydroxide, to achieve pH 3, 5 and 6. These represent the Pka values of the individual acid moieties within citric acid. The total number of coughs elicited per study day was recorded.



Abstract P243 Figure 1

Results Participants were gender matched, each group consisting 12 females. Two participants withdrew and were not included in the analysis. In healthy volunteers, 60% of people coughed at pH3 (average coughs 9), 30% of people coughed at pH5 (average coughs 3), and 10% of people coughed at pH6 (average coughs 0). In contrast, 74% of chronic coughers coughed at pH 3 (average coughs 16), 89% coughed at pH 5 (average coughs 18) and 63% coughed at pH 6 (average coughs 7). Thus there was a clear dose response to decreasing pH in healthy volunteers but not in chronic cough patients. The standard deviation of cough challenge on an individual day was determined to explore the variability of response to inhalation challenge. At pH 3 CC vs HV was x vs y , at pH 5 x vs y and at pH 6 x vs y ($p > 0.01$).

Discussion As we have previously reported, chronic cough patients are hypersensitive to citric acid challenge. However the response to individual challenge is much more variable than in HV, suggesting the cough reflex circuitry in these patients is 'unstable'. This was particularly shown at higher pH where cough was virtually abolished in healthy volunteers but not chronic cough patients. It has been widely suggested that cough hypersensitivity resides in up regulation and interplay of different peripheral receptors. That a single stimulus increases the variability of response in a pathological state suggests that hypersensitivity to citric acid resides in a complex central rather than peripheral mechanism.

Asthma quality improvement

P244 THE IMPACT OF "SEVEN DAY WORKING" ON RESPIRATORY INPATIENT ACTIVITY AT ST HELENS AND KNOWSLEY NHS TRUST. – "THE SLOW DRIFT MODEL"

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10.1136/thoraxjnl-2015-207770.380

St Helens and Knowsley NHS trust (STHK) have re designed the acute pathway for medical admissions. Investment in Consultant numbers has allowed the Acute Medical Admissions (MAU) team and the speciality teams to provide robust Consultant input to their areas Monday to Sunday. Speciality Consultants have been released from the acute medical take and traditional Physician of the day (POD) activities. Advantages of a Consultant led seven day service include: Greater parity of service across seven days a week; high level of clinical competence ensuring rapid and appropriate decision making; improved outcomes for patients; skilled judgement and performance leading to the most effective working and more efficient use of resources; and GP access to the opinion of a fully trained doctor.

Respiratory Consultant numbers have increased from 5 to 8 (7.5 WTE). 90 PA's have been invested in the service. The inpatient service is resourced with 64 inpatient beds. General principles have been applied to the inpatient service. These include: Each Consultant provides daily review, in the form of 3 ward rounds and 2 board rounds, to their allocated patients; rounds are performed in the first half of the day to aid patient flows and discharges; Consultants provide cross cover during leave; and weekends are covered on a 1 in 8 basis. Alteration to outpatient and elective services has also occurred.

Results 160% increase in weekend Respiratory discharges and 48% increase in overall Respiratory discharges, with no increase in bed base. Significant fall in Respiratory length of stay. 50% improvement in MET calls per discharge reflecting improved quality of care. Significant fall in readmissions. Positive feedback from patients, relatives and staff. Additional benefits include improved elective and outpatient productivity due to less clinic cancellations enforced by the traditional POD model of acute medical activity. Outpatient activity has increased by 50% and elective (Bronchoscopy) activity by 35%. Improved junior doctor support and education are also achieved. Significant decrease in departmental complaints.

Discussion The "slow drift" model presented here offers significant advantages over traditional working practices for both efficiency and outcome. The return on investment contributes to cost improvement programs.

P245 " ... NO CLEANING, NO STAIRS, NO SEX...EVERYTHING JUST STOPS": UNDERSTANDING LIVING WITH SEVERE ASTHMA TO INFORM EFFECTIVE SELF-MANAGEMENT

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10.1136/thoraxjnl-2015-207770.381

Introduction and objectives Despite the large socioeconomic burden of severe asthma, few studies have focused specifically on the patient experience of living with and managing severe asthma. Patient-related factors including behavioural, psychological and social factors complicate the management of the condition.

This study aimed to explore these experiences in individuals with severe asthma to understand how to support effective self-management.

Method Semi-structured interviews were conducted with participants recruited from a difficult asthma service at Step 4–5 of the BTS/SIGN guidelines. Recruitment occurred until theoretical saturation was achieved. Interviews were transcribed verbatim and

coded, supported by NVivo software (Version 10). Thematic analysis was performed.¹

Results 29 interviews were completed (44% male, mean age 49.45 (13.64) years, BMI 31.65 (5.48) kg/m², 4 smokers). Five themes describe the experience of living with and managing severe asthma:

Impact of asthma. Debilitating breathlessness was described impacting on many areas of participants lives, including relationships, work and family life.

Day to day management of asthma. Self-regulatory behaviours were described such as monitoring peak flow and pacing. However, these behaviours and the implied restrictions could induce distress and dissatisfaction. This limited self-management behaviours in-between the acute phases of illness.

Confidence to manage symptoms. Participants reported confidence to manage acute events, but the unpredictability of symptoms and fear of inducing symptoms appeared to undermine their confidence to manage symptoms.

Challenges to effective self-management. There were further multiple challenges to effective self-management, such as: understanding of disease; perceptions of asthma by others; reluctance to accept hospitalisation and the unpredictability of symptoms.

Beliefs about medication. There was conflict around long term oral steroids. Most participants resolved this by balancing the necessity of the medication versus the concerns they held about the long term effects of maintenance. There was little comment regarding inhaled medications.

Conclusion Strategies are needed to enhance acceptance and confidence to engage in self-management behaviours. This should encompass all aspects of the disease, not solely the acute phases, to minimise daily distress and increase effective self-management to improve the health status for this severe population.

REFERENCE

¹ Braun V. Using thematic analysis in psychology. *Qualitative Research in Psychology*. 2006;**3**:77–101

P246 SHOULD WE TELEPHONE MISSED ASTHMA APPOINTMENTS? A FOLLOW-UP EVALUATION OF FOUR YEARS OF PRACTICE

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10.1136/thoraxjnl-2015-207770.382

Introduction We have previously shown that telephone contact following missed asthma clinic appointments is a resource-intensive method of improving compliance in a relatively small group of patients.¹ Poor adherence to treatment leads to increased admissions and reduced quality of life. Reducing rates of missed appointments is a key efficiency target for service delivery for the hospital.

Aim To evaluate the outcome of telephone contact following missed asthma clinic appointments in a larger data set.

Methods We reviewed the outcomes of telephone contact with patients following a missed appointment at a difficult asthma clinic at an inner city hospital between 2011 and 2014. Difficult asthma is defined as ongoing symptoms despite level 4–5 treatment. Successful contact was defined as speaking to the patient or receiving a message. Unsuccessful contact describes when messages were left for patients but no response achieved.

Results Between 2012 and 2014 (inclusive) 457 patients missed an appointment. We attempted to contact 324 patients.