

## Research Ideas on Respiratory Conditions and Tobacco Dependency Abstract

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### Improving the Assessment of Adults with Chronic Cough in Primary Care

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**Research question:** What are the essential and achievable elements required to support methodical assessment and referral of chronic cough in adults seen in primary care?

**Background:** Chronic cough (>8 weeks) is a common reason for patient visits to primary care physicians (PCPs). Careful assessment of chronic cough is critical, because it can mask more serious conditions and has a significant impact on patient well-being and quality of life. Multiple guidelines encompass the assessment of chronic cough by specialists,<sup>1,2</sup> but there is less information available for the primary care setting. We have developed a simplified algorithm for the assessment of chronic cough in adult patients in Canadian primary care, modeled on the American College of Chest Physicians (ACCP) guidelines<sup>1</sup> (Figure 1). The aim of our proposed study is to further refine and validate this algorithm.

**Possible methodology:** We propose to refine the algorithm through presentations at conferences and to other groups of primary care physicians and specialists. Feedback from these settings will be used to modify the algorithm, with the goal of emphasizing assessment elements that can be achieved by primary care physicians prior to (and even during the process of) referral to specialty care. We anticipate the development of related versions of this algorithm, tailored to reflect local or national practice patterns and testing/specialist access. Validation of the algorithm could be achieved by examining the proportion of chronic cough patients within primary care who were successfully evaluated or referred before, versus after implementation of the algorithm by primary care physicians who choose to use the algorithm in routine clinical care.

**Questions to discuss:** The proposed study will help us identify assessment elements required for a successful diagnosis or referral of chronic cough in primary care patients. The use of the assessment algorithm has the potential to improve the care of patients with chronic cough, by ensuring appropriate work-up/assessment of a patient is not delayed whilst referral to secondary care is being sought. Supporting a patient through what can be a long and complex disease management process, has the potential to improve patient quality of life and associated journey.

#### References

1. Irwin RS et al. Chest 2018;153:196-209
2. Morice AH et al. Eur Respir J 2020;55:pil: 1901136.

#### Declaration of Interest

Dr. Kaplan is on advisory board or speakers bureau for Astra Zeneca, Behring, Boehringer Ingelheim, Covis, Grifols, GSK, Merck Frosst, Pfizer, Purdue, Novartis, NovoNordisk, Sanofi, Teva and Trudell

# Proposed Primary Care Approach to Assessing Adults with Chronic Cough

## Primary Investigations

To aid in diagnosis and/or referral

- Consider duration of symptoms (chronic cough definition >8 weeks)
- Review Red Flags (see below)
- Review medical history, including potential triggers:
  - Smoking, ACE inhibitors, sitagliptin?
  - Occupational/environmental issues or travel exposure?
- Perform physical exam
- Complete chest radiograph



## Work-up for potential underlying conditions

(Reassess in 4-6 weeks at least)

Assess for and treat as needed (alone or in combination)

- Asthma**
    - Testing: Spirometry
    - Exploratory initial treatment per guidelines if indicated
  - GERD**
    - Exploratory initial treatment per guidelines if indicated
- Consider initiating referral to secondary care while waiting for testing/treatment results  
 - Assess if treatment resolved chronic cough



## While patient waits to be seen by specialist

To expedite future diagnosis

- Consider other potential causes / additional investigations
- Consider possibility of >1 cause
- Assess adherence to treatment of potential underlying conditions
- Re-evaluate patient for (subtle) symptoms
- Continue to support your patient through their journey

### Red flags for more severe issues

- > Hemoptysis
- > Smoker >45 years with new cough, cough change or coexisting voice disturbance
- > Age 55-80 years: 30 pack-year smoking history + current smoker or quit <15 years ago
- > Prominent dyspnea, especially at rest or at night
- > Hoarseness
- > Systemic symptoms, including fever, weight loss, peripheral edema with weight gain
- > Trouble swallowing while eating or drinking
- > Vomiting
- > Recurrent pneumonia
- > Abnormal respiratory exam and/or chest radiograph coinciding with duration of cough

Other potential causes of chronic cough (often assessed in secondary care), including

- UACS
- NAEB
- Bronchiectasis

### Additional investigations (depending on access to testing)

- > 24-hour esophageal pH monitoring
- > Endoscopic/video/fluoroscopic swallow evaluation
- > Barium esophagram / modified barium swallow
- > Sinus imaging
- > HRCT
- > Bronchoscopy
- > Cardiac workup (ECG, Holter monitoring, Echo)
- > Environmental / occupational assessment
- > Uncommon causes?

Adapted from 2018 ACCP Guidelines  
 Irwin RS et al. Chest 2018;153(1):196-209

ACE, angiotensin-converting enzyme; ECG, electrocardiogram; HRCT, high resolution computed tomography; GERD: gastro-esophageal reflux disease, NAEB: non-asthmatic eosinophilic bronchitis, UACS: upper airway cough syndrome, PNDS: post-nasal drip syndrome; UACS, upper airway cough syndrome