**Supplemental information**

Sarah E Holden, Alyn Morice, Surinder S Birring, Sara Jenkins-Jones, Haya Langerman, Jessica Weaver, Craig J. Currie. Cough presentation in primary care and the identification of chronic cough: a need for diagnostic clarity?

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# Supplemental Figure 1 | Study design



crd = current registration date, lcd = last data collection date for the practice, tod = transferred out date, uts = up-to-standard date.

# Supplemental Figure 2 | Histogram of age at index date by cough subgroup

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# Supplemental Figure 3 | Attrition flow diagram



CPRD = Clinical Practice Research Datalink, HES = Hospital Episode Statistics, RTI = respiratory tract infection, uts = up-to-standard date.

# Supplemental Methods | Identification and characterization of underlying causes of chronic cough

Participants' records in the CPRD GOLD and HES inpatient data were searched for the following conditions known to be associated with CC: irritable bowel syndrome (IBS), heart failure, asthma, chronic obstructive pulmonary disease (COPD), gastro-esophageal reflux disease (GERD), and rhinitis and rhinosinusitis.

These underlying causes were further categorized as follows:

* History of underlying cause, if diagnosed prior to index date
* Current case, if the participant had a recorded diagnosis on the index date or had a prior diagnosis of the condition and was currently receiving treatment for this
* Subsequently diagnosed case, if the participant received a diagnosis indicative of the condition eight weeks or less after index date or, presented separately, between eight weeks and a year after index date.

Medications to treat an underlying cause comprised: respiratory medicines (inhaled corticosteroids, short-acting beta2 agonists, long-acting beta2 agonists, cromoglicates, theophylline, leukotriene receptor antagonists or oral corticosteroids) for asthma and COPD, medication used in the management of GERD (proton pump inhibitors, H2-receptor antagonists, antacids or alginates), and nasal corticosteroids and antihistamines for rhinitis and rhinosinusitis.

Other underlying factors associated of chronic cough: smoking, exposure to ACE inhibitor medication and increased body mass index, were identified from participants’ records.

Current users of ACE inhibitors were identified as such if their index date fell after the start and on or before the end of a period of continuous ACE inhibitor therapy plus 112 days and the participant had not been switched prior to the index date to a new drug class used for the same indication. ACE inhibitors were regarded as having been discontinued if the interval between prescriptions was greater than 112 days. (The maximum interval between prescriptions in continuous therapy was set as 112 days because, for ACE inhibitors, this represented the 95th percentile of patients’ maximum days’ supply.)

RTI was ascribed as a potential underlying cause of acute cough if recorded within the three weeks before or after the index date (this interval being selected because acute cough is defined as a cough lasting three weeks or less).