

## Literature Search

### **The full details of the databases searched to identify the studies.**

The CNKI, Wanfang, Chongqing VIP, China Biology Medicine disc, PubMed, Cochrane Library and EMBASE were explored using broad search strategies to identify all study evaluating the difference of pulmonary function indices between chronic obstructive pulmonary disease (COPD) patients with the exacerbator with chronic bronchitis (FE-CB) phenotype and those with the asthma-COPD overlap syndrome (ACO) phenotype. All searches were run from the earliest date available (1966 for PUBMED, 1970 for Web of Science, 1988 for EMBASE) until April 30, 2019. All indexed journals were included and retrieved. In addition, Google Scholar was also used to search relevant study. In order to search and include all potential studies, we applied various combinations of the following medical subject headings and key words in order to hold high sensitivity:

**Search Items:** “Chronic Obstructive Pulmonary Disease” or “COPD”; merging “Non-exacerbators” or “Nonexacerbators” or “nonexacerbator” or “non-frequent exacerbators with chronic bronchitis or emphysema” or “non-exacerbator phenotype with either chronic bronchitis or emphysema” or “NE” or “NONEX” or “NE-CB/E” or “NON-AE”, merging “exacerbators with chronic bronchitis” or “frequent exacerbators with chronic bronchitis” or “frequent exacerbator phenotype with chronic bronchitis” or “exacerbator phenotype with chronic bronchitis” or “exacerbator with chronic bronchitis ”or “FE-CB”.

All the general medical journals subscribed by our university has been searched. We therefore hand searched BMJ, AMA, Elsevier, Science Online, Springer and Nature

from library. We routinely reviewed the content of those medical journals for the year up until the end of April 30, 2019. Chinese papers were selected by searching WanFang Data, Chongqing VIP (CQVIP), China National Knowledge Infrastructure(CNKI) databases using the same search terms. The references of the eligible articles were also inspected to find other potential studies. As a search limit, only studies published in English or Chinese were included.