



Overlap of asthma and COPD in outpatient health care—analysis of claims data

Manas K. Akmatov¹ • Tatiana Ermakova^{1,2} • Jakob Holstiege¹ • Claudia Kohring¹ • Frank Ng¹ • Sebastian Völker³ • Jörg Bätzing¹

¹ Central Research Institute of Ambulatory Health Care in Germany, Berlin

² Weizenbaum Institute & Fraunhofer FOKUS, Berlin

³ Association of Statutory Health Insurance Physicians of Westphalia-Lippe, Dortmund

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Abstract

Background

Some patients have symptoms of both asthma and chronic obstructive pulmonary disease (COPD). This is referred to as asthma-COPD overlap (ACO). The current study examines the prevalence of concurrent diagnoses of asthma and COPD and its regional differences in outpatient care.

Methods

We used nationwide outpatient claims data of statutory health insurees (SHI) from 2017. The data contain diagnoses coded according to the International Classification of Diseases and related Health Problems (ICD-10). Since there is no separate code for ACO, we used diagnoses J44 (COPD) and J45 (asthma) to define an overlap. We defined a patient having ACO if diagnoses of asthma and COPD have been coded in at least two quarters of 2017. The study population comprised SHI-individuals over 40 years of age. Regional differences were examined at the level of 402 districts.

Results

Of the total 40,477,745 insurees over the age of 40 years in 2017, 4,632,295 (11%) were diagnosed with either asthma or COPD. Of them, about 2,002,800 (43%) were diagnosed with asthma only and 2,021,600 (44%) with COPD only. The remaining 607,900 (13%) had diagnoses of both diseases. Among all patients with asthma, the proportion of patients with COPD diagnoses was 23.3%. The other way around, the proportion of patients with asthma among patients with COPD was 23.1%. In the total SHI-population, the diagnostic prevalence of ACO was 1.5%. The prevalence of ACO was slightly higher among females than males (1.6% vs. 1.4%) and displayed a positive association with age. It namely increased among females and males constantly from about 0.40% in the age group of 40–44 years to 2.4% in the age group of 80–84 years. The prevalence of ACO differed by a factor of 4.6 between 0.6% and 2.6% across districts.

Conclusion

This is the first study to provide morbidity estimates of ACO in Germany based on nationwide secondary data from the outpatient health sector. Further studies, in particular with primary data collection, are necessary to provide more epidemiological evidence for the occurrence of ACO.

Corresponding author: Dr. Manas K. Akmatov
Central Research Institute of Ambulatory Health Care in Germany (Zi)
Salzufer 8 – 10587 Berlin – Tel. +49 30 4005 2414 – E-Mail: makmatov@zi.de





Keywords

ACO; asthma-COPD overlap; claims data; diagnostic prevalence; ICD-10; regional variation; Germany

Citation

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