



SHI-physicians ambulatory health care for COVID-19 in a nationwide regional comparison (Part 1)

Focus on the 1st pandemic wave in Germany

Joachim Heuer* • Jörg Bätzing* • Jakob Holstiege • Manas K. Akmatov • Lotte Dammertz • Claudia Kohring • Dominik von Stillfried

* both Authors contributed equally to the current work.

DOI: 10.20364/VA-22.05

Abstract

Background

The aim of the present work is to systematically and comprehensively review the outpatient SHI-physicians health care performance of COVID-19 patients in Germany during the first pandemic wave in 2020 and in the decay phase thereafter.

Methods

The data basis of the present analyses is the nationwide claims data of the Associations of Statutory Health Insurance Physicians (ASHIPs) of all contractual medical practices of physicians and psychotherapists in Germany from the period January to September 2020 according to §295 Social Code Book V (SGB V) (N=68.573.688 insurees). Patients with a COVID-19 diagnosis are identified using the diagnosis code U07.1[!] according to ICD-10-GM and the additional sign G (confirmed diagnosis), as well as patients with other codes for COVID-19. In addition, COVID-19 patients were grouped according to risk criteria that may be associated with a severe course of the disease. Publicly available notification data of COVID-19 patients according to the Infection Protection Act (IfSG) are contrasted and compared to COVID-19 patient numbers from contract medical care.

Results

The overall nationwide prevalence of outpatients with a confirmed COVID-19 diagnosis was 0.42%. In addition, COVID-19 patients were identified epidemiologically confirmed without laboratory evidence regardless of clinical symptoms (prevalence 0.25%). The proportion of female SHI-insured patients in the population with laboratory-confirmed COVID-19 diagnosis was 56.3%, slightly higher than the 54.4% in the population without COVID-19 diagnosis. Mean age was lower in COVID-19 patients than in the total of SHI population for both men and women in all three quarters. Regionally, a COVID-19 prevalence gradient was evident, with lower values in the north and northeast than in the west and south of Germany. Of the COVID-19 patients in outpatient care, 93.5% received care in only one quarter, 6.1% in two quarters, and 0.4% in all 3 quarters of the study period while coding for a COVID-19 diagnosis. In the patient population with COVID-19 diagnoses in at least two quarters, the proportions in risk groups 2 and 3 (age groups 15-39 and 60-79 years, respectively, with specific constellations of pre-existing conditions) were slightly higher than in patients COVID-19 diagnosis in one quarter only. Within the spatial cluster analysis, four clusters of neighboring districts were found revealing increased diagnosis

Corresponding authors: Joachim Heuer | Dr. Jörg Bätzing
Central Research Institute of Ambulatory Health Care in Germany (Zi)
Salzufer 8 – 10587 Berlin – Germany
Tel. (030) 4005 2412 – E-Mail: jheuer@zi.de | Tel. (030) 4005 2419 – E-Mail: jbaetzing@zi.de





prevalence as well as another large cluster characterized by neighborhood relationships of low-low prevalences. Specific laboratory analyses to detect SARS-CoV-2 (EBM No. 32816) were requested for an increasing proportion of COVID-19 patients during the study period. Tested patients with COVID-19 diagnosis received a higher mean number of specific laboratory services for the detection of SARS-CoV-2 per 100 patients than tested patients without COVID-19 diagnosis. COVID-19 patients receiving outpatient care had higher mean numbers of treatment cases compared with the patients without laboratory-confirmed COVID-19 diagnosis. In the patient-based analysis, the largest shares of care were accounted for by general practitioners (excluding pediatricians) and, in the specialist sector, by laboratory physicians and specialists in microbiology, virology and infectious disease epidemiology.

Conclusions

The total number of COVID-19 patients corresponding to an administrative prevalence of 0.67% underscores the very large contribution of primary care physicians providing COVID-19-related care in Germany from the beginning of the pandemic. The results indicate that children did not bear the major burden of disease at this early stage of the epidemic and thus should predominantly not be considered as drivers of the epidemic. The outpatient care proportion of COVID-19 patients in the elderly is lower than expected, indicating that this patient segment was primarily cared for exclusively in the hospital sector due to the age- and preexisting disease-related risk constellation for severe disease progression and due to increased mortality, and did not appear in the outpatient sector at all. In particular, outpatient care was provided by the family physician care sector and laboratory medicine. Whether the number of quarters with laboratory-confirmed COVID-19 diagnoses coded and thus clinically relevant is actually related to the occurrence of long-COVID or a post-COVID-19 condition cannot be conclusively assessed during the study period. However, treatment for COVID-19 for more than one quarter was rare, accounting for 6.5% of all COVID-19 patients. Outpatient treatment of COVID-19 patients by SHI-physicians is characterized by above-average utilization. For COVID-19, the claims data from SHI-accredited physicians showed a comparatively good agreement with the notification data according to the Infection against Protection Act (Infektionsschutzgesetz; IfSG).

Keywords

COVID-19, diagnosis prevalence, Germany, SHI-physicians health care, infectious disease notification, protection against infection act, laboratory testing, prevalence, SARS-CoV-2

Citation

Heuer J, Bätzing J, Holstiege J, Akmatov MK, Dammertz L, Kohring C, von Stillfried D. SHI-physicians ambulatory health care for COVID-19 in a nationwide regional comparison (Part 1) – Focus on the 1st pandemic wave in Germany. Central Research Institute for Ambulatory Health Care in the Federal Republic of Germany (Zi). Versorgungsatlas-Report No. 22/05. Berlin 2022. URL: <https://doi.org/10.20364/VA-22.05>