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Regional Variation in the Utilization of After-Hours Outpatient Emergency Care in Germany, 2015–2024

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Abstract

Background

The Krankenhausstrukturgesetz (Hospital Structure Act, 2015) and the Terminservice und Versorgungsgesetz (Appointment Service and Healthcare Act, 2019) further specified the distribution of responsibilities in emergency care between hospitals and the outpatient sector. In view of the persistently high workload in emergency services, ambulatory emergency care remains a central topic in current health policy discussions on the upcoming emergency care reform. Against this background, the present analysis examines nationwide developments in after-hours care (weekdays 7 p.m.–7 a.m., as well as all day on Saturdays, Sundays, public holidays, and on December 24 and 31) between 2015 and 2024 as well as regional variation in the utilization of ambulatory emergency care during this period in Germany.

Methods

The study was based on nationwide, cross health insurer outpatient billing data according to § 295 of the German Social Code Book V (SGB V) for the years 2015 to 2024 (Bremen excluded). Treatment cases were classified as emergency contacts if specific emergency related codes of the German uniform assessment standard (Einheitlicher Bewertungsmaßstab, EBM) or regional billing codes in after-hours care had been billed. A distinction was made between pure assessment contacts and those followed by treatment, as well as between the levels of care—hospital emergency departments and the medical on call service (Ärztlicher Bereitschaftsdienst, ÄBD). Absolute numbers and relative changes are reported. The regional analysis was performed at the district level and weighted by population data from the Indicators and Maps for Spatial and Urban Development (Indikatoren und Karten zur Raum und Stadtentwicklung, INKAR) database and the proportion of people with statutory health insurance in each federal state (KM-6).

Results

Between 2015 and 2024, the number of ambulatory emergency cases outside of regular office hours decreased from 13,494,727 to 12,992,441 (-3.7 %). Emergency contacts occurred more frequently in medical on call service than in hospital emergency departments. In the on call service, case numbers declined from 7,203,379 to 6,539,283 (–9.2%), whereas in emergency departments they increased from 6,291,348 to 6,453,158 (+2.6%). In eastern federal states, the number of ambulatory emergency cases per capita was consistently lower than in western regions over time. Between 2016 and 2024, 145 districts experienced a decline in both care settings, while seven districts showed increases in both care settings. Increasing emergency department utilization alongside declining on call service use was observed in 57 districts, whereas 31 districts showed the opposite pattern.

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Discussion

Regional differences in the utilization of emergency departments and the medical on call service can partly be explained by variations in the structural organization of the on call service. In addition, factors such as patient autonomy, health literacy, and regional morbidity patterns may influence utilization behavior. Particularly the increasingly case closing telephone consultations provided by the 116117 medical helpline (Patientenservice 116117), which are not fully represented in the EBM, have contributed to a reduction in recorded emergency service cases. Moreover, the study period saw extensive changes in regional cooperation structures, patient pathways, care coordination, and digital service offerings. The increasing use of hospital emergency departments and the regional variation in the chosen level of care collectively underscore the need for a reform of emergency care. Such a reform should implement patient navigation adapted to regional differences in emergency structures and ensure demand oriented acute and emergency care.

Keywords

After-hours-care, emergency department, medical helpline 116117, out-of-hours care, outpatient emergency care, patient navigation, regional healthcare utilization, statutory health insurance physician care, treatment necessity assessment

Citation

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