

Research Compact

Tags	Healthcare-associated infections
Title	Application of new methodology and R package reveals a high burden of healthcare-associated infections (HAI) in Germany compared to the average in the European Union/European Economic Area, 2011 to 2012
Authors	Zacher B*, Haller S, Willrich N, Walter J, Sin MA, Cassini A, Plachouras D, Suetens C, Behnke M, Gastmeier P, Wieler LH, Eckmanns T *Corresponding author: Robert Koch Institut, Berlin, Germany
Source	2019, Eurosurveillance, https://doi.org/10.2807/1560-7917.es.2019.24.46.1900135
Aim of the study	Estimation of the five most common healthcare-associated infections (HAI) and their attributable deaths as well as the resulting burden for Germany using the data of the European point prevalence study of 2011. HAI: <i>Clostridium difficile</i> infection, pneumonia, bloodstream infection, urinary tract infection and surgical site infection
Methods	A new package for the powerful computer statistics tool "R" was developed. It takes advantage of the data collected under the European Point-prevalence study. The burden for Germany by healthcare-associated infections was estimated and expressed by disability-adjusted life years (DALYs) per 100,000 citizens.
Results	In total the study estimated a number of 478,222 healthcare-associated infections in Germany with 16,245 attributable deaths. The burden for Germany was calculated to 308.2 DALYs/100,000 population, This shows that the burden for Germany is higher compared to the European average of 290 DALYs/100,000, although the overall risk of infection during a hospital stay is lower in Germany (3.6%) compared to EU (5.5%).

		Pneumonia	urinary tract	bloodstream	surgical site	<i>C. difficile</i>	All
HAIs/100,000	Germany	132.2	265.1	33.4	115.4	44.6	592.1
	Europe	143.7	174.7	22.2	111.3	16.0	467.9
Burden [DALYs/100,000]	Germany	86.1	82.6	72.2	35.7	25.9	308.2
	Europe	109.8	57.1	76.2	35.1	10.0	290.0
attributable deaths/100,000	Germany	4.9	4.5	4.8	2.9	2.4	20.1
	Europe	5.3	3.0	3.3	2.6	0.9	15.3

Conclusion

This study is the first to estimate the burden of HAIs in Germany by means of DALYs. The burden is higher than the European average. Stronger focus on infection prevention control in Germany is needed to reduce this burden.