

1 **Table S1** Healthcare-associated infections as defined by the European Centre for Disease Prevention
2 and Control and causing pathogens in patients receiving linezolid. Data from the national point
3 prevalence surveys 2011 and 2016. Data comparison of the two surveys
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Healthcare-associated infection	Variable/Pathogen	Number PPS 2011	PPS 2016	p-value
All	Number of infections	67	129	n.a.
	All isolated pathogens	75	132	
	<i>Staphylococcus aureus</i> (MRSA)	14 (9)	19 (12)	
	<i>Enterococcus</i> spp. (VRE)	16 (4)	44 (10)	
	Coagulase-negative staphylococci	10	21	
	<i>Enterobacter</i> spp.	6	6	
	<i>Escherichia coli</i>	7	12	
	<i>Klebsiella</i> spp.	5	6	
	<i>Pseudomonas aeruginosa</i>	3	9	
	Other	14	15	
	Bloodstream infection	Number of infections	9	
All isolated pathogens		11	28	
<i>Staphylococcus aureus</i> (MRSA)		2 (1)	6 (4)	
<i>Enterococcus</i> spp. (VRE)		3 (0)	8 (2)	
Coagulase-negative staphylococci		3	7	
<i>Enterobacter</i> spp.		0	0	
<i>Escherichia coli</i>		2	2	
<i>Klebsiella</i> spp.		0	1	
<i>Pseudomonas aeruginosa</i>		0	2	
Other		1	2	
Non-laboratory confirmed systemic infection		Number of infections	5	6
Lower respiratory tract infection	Number of infections	19	32	n.a.
	All isolated pathogens	21	25	
	<i>Staphylococcus aureus</i> (MRSA)	5 (4)	8 (5)	
	<i>Enterococcus</i> spp. (VRE)	2 (1)	3 (0)	
	Coagulase-negative staphylococci	1	2	
	<i>Enterobacter</i> spp.	2	4	
	<i>Escherichia coli</i>	0	1	
	<i>Klebsiella</i> spp.	2	3	
	<i>Pseudomonas aeruginosa</i>	3	1	
	Other	6	3	
	Surgical site infection	Number of infections	20	
All isolated pathogens		30	42	
<i>Staphylococcus aureus</i> (MRSA)		4 (3)	2 (1)	
<i>Enterococcus</i> spp. (VRE)		7 (3)	20 (5)	
Coagulase-negative staphylococci		4	6	
<i>Enterobacter</i> spp.		4	2	
<i>Escherichia coli</i>		5	5	
<i>Klebsiella</i> spp.		3	0	
<i>Pseudomonas aeruginosa</i>		0	3	
Other		3	4	
Urinary tract infection		Number of infections	4	11
	All isolated pathogens	4	6	
	<i>Staphylococcus aureus</i> (MRSA)	0	0	
	<i>Enterococcus</i> spp. (VRE)	2 (0)	4 (1)	
	Coagulase-negative staphylococci	0	0	
	<i>Enterobacter</i> spp.	0	0	
	<i>Escherichia coli</i>	0	0	
	<i>Klebsiella</i> spp.	0	1	
	<i>Pseudomonas aeruginosa</i>	0	0	
	Other	2	1	
	<i>Clostridioides difficile</i> infection	Number of infections	2	4
Other/Not specified	Number of infections	8	23	n.a.

5 Except where specified otherwise, p-values were calculated using Chi-squared test. Abbreviations: PPS point prevalence
6 survey; MRSA methicillin-resistant *Staphylococcus aureus*; VRE vancomycin-resistant enterococci; (a) p-values were
7 calculated for all listed pathogens collectively using R by C tables

8 **Table S2** Structural and process parameters of antimicrobial use and antimicrobial stewardship of
 9 218 hospitals that participated in the point prevalence survey 2016

Variable	Group/Parameter	Number (percentage) or Median (interquartile range)			p-value
		All hospitals (n=218)	Hospitals without linezolid use (n=123)	Hospitals with linezolid use (n=95)	
Microbiological diagnostics	Number of blood cultures per 100 patient-days	2.1 (1.3-3.1)	1.7 (0.9-2.6)*	2.5 (1.8-3.5)*	<0.01*
	Number of stool samples for <i>Clostridioides difficile</i> infection per 100 patient-days	0.7 (0.5-1.1)	0.6 (0.2-1.1)*	0.8 (0.6-1.1)*	0.01*
Surveillance (regional or national network)	<i>Clostridioides difficile</i> infection	119 (54.6)	64 (52.0)	55 (57.9)	0.39
	Antimicrobial consumption	83 (38.1)	45 (36.6)	38 (40)	0.60
	Antimicrobial resistance	56 (25.7)	35 (28.5)	21 (22.1)	0.29
Componentes of multimodal strategies (at the hospital level)	Guideline for antimicrobial use	157 (72.0)	90 (73.2)	67 (70.5)	0.67
	Training for antimicrobial use	37 (17.0)	19 (15.4)	18 (18.9)	0.50
	Bundle for antimicrobial use	136 (62.4)	86 (69.9)	50 (52.6)	<0.01
	Checklist for antimicrobial use	25 (11.5)	18 (14.6)	7 (7.4)	0.10
	Audit for antimicrobial use	74 (33.9)	44 (35.8)	30 (31.6)	0.52
	Surveillance of antimicrobial use	145 (66.5)	84 (68.3)	61 (64.2)	0.53
	Feedback of data on antimicrobial use	150 (64.2)	82 (66.7)	58 (61.1)	0.40
Post-prescription review of antimicrobials within 72 hours	Percentage of hospital beds	0 (0-16.8)	0 (0-22.4)*	0 (0-15.1)*	0.29*
Designated staff for antimicrobial stewardship	Hospital with designated staff for antimicrobial stewardship	61 (28.0)	35 (28.5)	26 (27.4)	0.86
	Fulltime equivalents per hospital	0 (0-0.1)	0 (0-0.1)*	0 (0-0.2) *	0.80*
	Fulltime equivalents per 250 beds	0 (0-0.1)	0 (0-0.1)*	0 (0-0.1)*	0.58*

10 Where necessary, asterisks are used to indicate the datasets relating to a p-value. P-values for variables where median and
 11 interquartile range are stated, were calculated with Mann–Whitney U test. P-values for variables where number and
 12 percentage are stated, were calculated with Chi-squared test. Bold print is used to indicate statistical significance.

13 **Table S3** Antimicrobial use in German acute care hospitals. Data from the national point prevalence
 14 surveys 2011 and 2016 of the core group participating in both surveys. Data comparison of the two
 15 surveys

Parameter	Group	Variable	Number (percentage) or Median (IQR)				p-value	
			Total PPS 2011	With linezolid use PPS 2011	Total PPS 2016	With linezolid use PPS 2016		
Participating hospitals	Total		46 (100)	19 (41.3)	46 (100)	22 (47.8)	0.54	
	Number of hospital beds	Median (IQR)	368 (261-674)*	666 (434-785)**	392 (229-639)*	578 (383-794)**	0.86*; 0.31**	
	Prevalence of patients with antimicrobial use	Median (IQR)	28.0 (20.9-31.8)*	29.9 (26.4-31.7)**	26.5 (20.0-31.3)*	28.6 (20.0-35.9)**	0.82*; 0.92**	
	Region	West		16 (100)	4 (25)	16 (100)	3 (18.8)	0.70
		North		6 (100)	1 (16.7)	6 (100)	4 (66.7)	0.13
		Southwest		8 (100)	4 (50)	8 (100)	6 (75)	0.36
		Southeast		9 (100)	5 (55.6)	9 (100)	4 (44.4)	0.67
		East		7 (100)	5 (71.4)	7 (100)	5 (71.4)	>0.99
	Hospital type	Primary care		23 (100)	3 (13.0)	21 (100)	6 (28.6)	0.23
		Secondary care		14 (100)	9 (64.3)	12 (100)	8 (66.7)	0.91
		Tertiary care		8 (100)	7 (87.5)	10 (100)	8 (80)	0.74
		Specialized hospital		1 (100)	0 (0)	3 (100)	0 (0)	n.a.
	Hospital ownership	Public		n.a.	n.a.	21	12 (57.1)	n.a.
		Private, not for profit		n.a.	n.a.	10	3 (30)	n.a.
Private, for profit			n.a.	n.a.	8	4 (50)	n.a.	
Other/Unknown			n.a.	n.a.	7	3 (42.9)	n.a.	
Participating wards	Total		890 (100)	38 (4.3)	868 (100)	50 (5.8)	0.15	
	Number of ward beds	Median (IQR)	26 (17-33)*	20 (14-36)**	26 (18-34)*	24 (16-32)**	0.01* ; 0.08**	
	Prevalence of patients with antimicrobial use	Median (IQR)	23.7 (10.0-39.2)*	52.2 (33.1-72.5)**	25.0 (12.0-42.3)*	48.8 (38.3-74.0)**	0.04* ; 0.05**	
	Percentage of antimicrobials with reason in notes	Median (IQR)	92.3 (50.0-100)*	88.6 (61.1-100)**	83.3 (40.0-100)*	87.0 (34.6-100)	<0.01* ; 0.01**	
	Percentage of linezolid among all antimicrobials	Median (IQR)	0.0 (0.0-0.0)*	9.1 (7.1-14.3)**	0.0 (0.0-0.0)*	7.8 (6.2-14.3)**	<0.01* ; 0.82**	
	Ward specialty	Medical (incl. geriatrics, neurology)		277 (100)	8 (2.9)	298 (100)	13 (4.4)	0.36
		Surgical (incl. G/O, urology, ENT)		311 (100)	12 (3.9)	277 (100)	14 (5.1)	0.49
		ICU		88 (100)	16 (18.2)	90 (100)	21 (23.3)	0.41
		Other/Not specified		214 (100)	2 (0.9)	203 (100)	2 (1.0)	0.96
		Region		249 (100)	9 (3.6)	233 (100)	6 (2.6)	0.53
	Region	North		99 (100)	1 (1.0)	115 (100)	6 (5.2)	0.10
Southwest			181 (100)	6 (3.3)	162 (100)	14 (8.6)	0.04	
Southeast			111 (100)	7 (6.3)	119 (100)	6 (5.0)	0.69	
East			250 (100)	15 (6)	239 (100)	18 (7.5)	0.51	
Included patients	Total		17009 (100)	46 (0.3)	17462 (100)	59 (0.3)	0.26	
	Patient specialty	Medical (incl. geriatrics, neurology)		6817 (100)	12 (0.2)	7509 (100)	12 (0.2)	0.81
		Surgical (incl. G/O, urology, ENT)		7243 (100)	17 (0.2)	7302 (100)	30 (0.4)	0.06
		Intensive care		801 (100)	17 (2.1)	774 (100)	17 (2.2)	0.92
Other/Not specified			2148 (100)	0 (0)	1877 (100)	0 (0)	n.a.	

16 Where more than one p-value per row is given, asterisks are used to indicate the corresponding datasets. P-values for
 17 variables where median and interquartile range are stated, were calculated with Mann–Whitney U test. P-values for
 18 variables where number and percentage are stated, were calculated with Chi-squared test. Bold print is used to indicate
 19 statistical significance. Abbreviations: *IQR* interquartile range; *PPS* point prevalence survey; *West* North Rhine-Westphalia;
 20 *North* Bremen, Hamburg, Lower Saxony, Mecklenburg-West Pomerania, Schleswig-Holstein; *Southwest* Baden-
 21 Württemberg, Saarland, Rhineland-Palatinate; *Southeast* Bavaria, Hesse; *East* Berlin, Brandenburg, Saxony, Saxony-Anhalt,
 22 Thuringia; *n.a.* not available/not applicable; *FTE* full-time equivalent; *G/O* gynecology and obstetrics; *ENT* otolaryngology;
 23 *ICU* intensive care unit