

Эмнэлгээс шалтгаалах халдвар

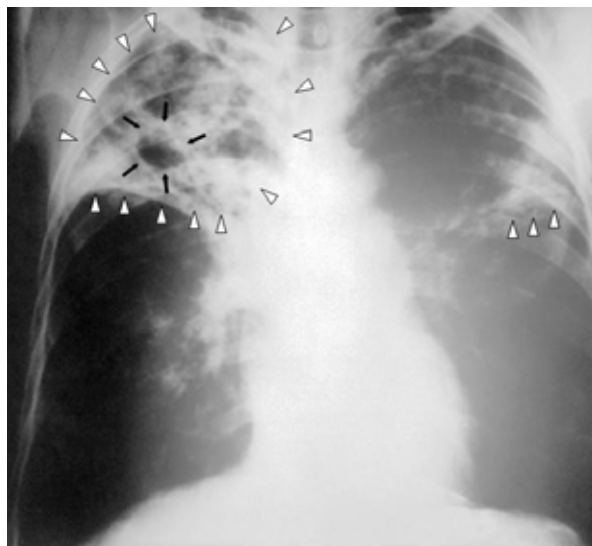
Монгол Улс, 2011 оны 10 сар

Германы Эссэний Клиникийн их сургуулийн
Эмнэлгийн эрүүл ахуй тэнхим, Проф. Волтер Попп



Тандалтын тайлан





3

Table 2.1.6. Number and notification rate of reported cases of tuberculosis in the EU and EEA/EFTA, 2006–08

Country	Report type ^a	All cases 2008		Confirmed cases ^b 2008		2007		2006	
		Total number and notification rate per 100 000 population		Total number and notification rate per 100 000 population		Notification rate per 100 000 population (all reported cases)		Notification rate per 100 000 population (all reported cases)	
		Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Austria	C	—	—	—	—	874	10.5	906	11.0
Belgium	C	1 006	9.4	816	7.6	1 020	9.6	1 102	10.6
Bulgaria	C	3 151	41.2	1 361	17.8	1 038	10.7	3 232	42.0
Cyprus	C	50	6.3	36	4.6	42	5.4	37	4.8
Czech Republic	C	868	8.4	561	5.4	846	8.2	961	9.3
Denmark	C	307	6.2	283	5.8	391	7.8	382	7.1
Estonia	C	444	33.1	347	25.9	488	36.4	458	33.8
Finland	C	350	6.6	348	6.2	348	6.6	292	5.6
France	C	5 812	9.3	2 298	3.6	5 588	8.8	5 334	8.6
Germany	C	4 543	5.5	3 148	3.8	4 998	6.1	5 328	6.5
Greece	C	460	6.0	252	2.2	450	5.9	481	6.1
Hungary	C	1 606	16.0	266	2.6	1 682	16.2	1 815	18.4
Ireland	C	470	10.2	209	4.2	480	11.0	443	10.0
Italy	C	4 418	7.4	1 539	2.6	4 525	7.6	4 583	7.6
Latvia	C	1 070	42.1	838	36.0	1 255	55.1	1 328	58.0
Lithuania	C	1 250	46.8	1 016	48.8	1 408	71.3	1 559	75.6
Luxembourg	C	18	5.8	—	—	39	8.1	33	7.0
Malta	C	53	13.0	25	6.1	38	9.3	30	7.4
Netherlands	C	987	6.1	729	4.4	1 000	6.1	1 015	6.2
Poland	C	8 081	21.2	5 094	13.6	8 616	22.6	8 582	22.5
Portugal	C	2 995	28.2	2 007	18.9	3 130	29.8	3 425	32.4
Romania	C	24 796	115.1	14 762	68.6	24 946	115.3	26 935	124.8
Slovakia	C	433	11.2	383	7.1	482	12.6	230	13.5
Slovenia	C	213	10.6	201	9.9	218	10.8	215	10.2
Spain	C	8 214	18.1	4 483	9.9	7 768	17.3	8 029	18.2
Sweden	C	552	6.8	438	4.2	481	5.3	462	5.5
United Kingdom	C	8 655	14.1	4 872	8.0	8 314	13.6	8 208	13.2
EU total		84 481	16.8	47 308	9.2	83 779	16.9	87 289	17.5
Iceland	C	6	1.0	5	1.6	14	4.5	13	4.3
Liechtenstein	C	—	—	—	—	5	14.2	—	—
Norway	C	324	6.8	228	4.8	302	6.5	290	6.2
Total		84 805	16.2	47 541	9.6	84 105	16.8	87 583	17.5

Source: Country reports. ^a Aggregated data report; ^b Case-based report; ^c No report; ^d Disproportion.
 (d) Confirmed only on the laboratory criteria, i.e. culture positive or smear and/or histology and/or tests positive.
 Note: For several countries these data are to be rounded up or down.

Table 2.1.6. Number and notification rate of reported cases of tuberculosis in the EU and EEA/EFTA, 2006–08

Country	Report type*	All cases 2008		Confirmed cases** 2008		2007		2006	
		Total number and notification rate per 100 000 population		Total number and notification rate per 100 000 population		Notification rate per 100 000 population (all reported cases)		Notification rate per 100 000 population (all reported cases)	
		Cases	Rate	Cases	Rate	Cases	Rate	Cases	Rate
Austria	C	—	—	—	—	874	10.5	996	11.0
Belgium	C	1 006	9.4	816	7.6	1 020	9.6	1 102	10.4
Bulgaria	C	3 351	41.2	1 361	17.8	1 038	39.7	3 231	41.0
Cyprus	C	50	4.3	36	4.6	42	5.4	37	4.8
Czech Republic	C	868	8.4	561	5.4	846	8.2	951	9.3
Denmark	C	347	6.2	283	5.2	391	7.2	387	7.1
Estonia	C	444	33.1	347	25.0	488	36.4	454	33.8
Finland	C	350	6.6	348	6.7	348	6.6	297	5.6
France	C	5 812	9.1	2 294	3.6	1 588	8.8	5 334	8.4
Germany	C	4 543	5.5	3 148	3.8	4 998	6.1	5 378	6.5
Greece	C	649	6.0	252	2.2	650	5.9	681	6.1
Hungary	C	1 606	16.0	766	7.6	1 682	16.2	1 855	18.4
Ireland	C	470	10.7	209	4.7	480	11.0	463	10.9
Italy	C	4 418	7.4	1 539	2.6	4 525	7.4	4 583	7.4
Latvia	C	1 070	47.3	838	36.8	1 255	55.1	1 318	58.8
Lithuania	C	1 250	66.8	1 816	48.0	2 408	75.3	2 558	75.4
Luxembourg	C	28	5.8	—	—	39	8.1	33	7.0
Malta	C	63	11.0	25	6.1	38	3.3	50	7.4

Сүрьеэ

Монгол улсад 2010 онд сүрьеэгийн 4,218 тохиолдол шинээр бүртгэгдсэн бөгөөд энэ нь 100,000 хүнд 156 тохиолдол байна.

Халдвар эмнэлэг дотор дамжин халдварлах боломжтой.

Тусгаарлах

Ажилчдыг халдвараас хамгаалах: Амны хаалт, бээлий, халаад, малгай, гарын халдваргүйтгэл хийх нь чухал

Вакцин өндөр үр дүнтэй биш.

Country	C	2008	2007	2006	2005	2004	2003	2002	2001
Total		82 644	16.7	47 541	9.6	84 185	16.8	87 583	17.5

Source: Country reports. *M: Aggregated data reports; C: Case-based reports; —: No report; N: Disaggregated. (d) Confirmed rate on the tuberculosis criteria, i.e. culture positive or smear and source, all tests positive. Note: For several countries these data are to be considered as preliminary.

Table 2.1.8. Number of multidrug-resistant tuberculosis cases in EU and EEA/EFTA countries, 2008 (n = 1717)

Country	Cases with sensitivity test results (isoniazid & rifampicin)	Number of MDR TB cases (number of XDR TB cases)	MDR percentage from tested cases
Austria	—	—	—
Belgium	773	22 (3)	2.8
Bulgaria*	938	32 (0)	3.4
Cyprus	36	1 (0)	2.8
Czech Republic	520	11 (1)	2.1
Denmark	281	0 (0)	0.0
Estonia	347	74 (9)	21.3
Finland	247	1 (0)	0.4
France*	1 554	27 (—)	1.7
Germany	2 963	45 (—)	1.5
Greece	—	—	—
Hungary*	611	16 (—)	2.6
Ireland*	146	3 (—)	2.1
Italy*	1 932	71 (—)	3.7
Latvia	828	129 (19)	15.4
Lithuania*	1 816	224 (—)	12.1
Luxembourg	—	—	—
Malta*	25	0 (0)	0.0
Netherlands	728	13 (—)	1.8
Poland	—	—	—
Portugal	1 441	28 (—)	1.7
Romania*	5 547	816 (54)	14.7
Slovakia	383	4 (0)	1.0
Slovenia	395	2 (—)	1.0
Spain*	1 428	24 (3)	4.7
Sweden	471	12 (1)	2.8
United Kingdom	4 808	53 (1)	1.1
EU total	28 172	1 712 (90)	6.1
Iceland	5	1 (0)	20.0
Liechtenstein	—	—	—
Norway	227	4 (0)	1.8
Total	28 404	1 717 (90)	6.0

—: No data.
* Data considered to be incomplete.

Table 1: Persistence of clinically relevant bacteria on dry inanimate surfaces.

Type of bacterium	Duration of persistence (range)	Reference(s)
<i>Acinetobacter</i> spp.	3 days to 5 months	[18, 25, 28, 29, 87, 88]
<i>Bordetella pertussis</i>	3 – 5 days	[89, 90]
<i>Campylobacter jejuni</i>	up to 6 days	[91]
<i>Clostridium difficile</i> (spores)	5 months	[92–94]
<i>Chlamydia pneumoniae</i> , <i>C. trachomatis</i>	≤ 30 hours	[14, 95]
<i>Chlamydia psittaci</i>	15 days	[90]
<i>Corynebacterium diphtheriae</i>	7 days – 6 months	[90, 96]
<i>Corynebacterium pseudotuberculosis</i>	1–8 days	[21]
<i>Escherichia coli</i>	1.5 hours – 16 months	[12, 16, 17, 22, 28, 52, 90, 97–99]
<i>Enterococcus</i> spp. including VRE and VSE	5 days – 4 months	[9, 26, 28, 100, 101]
<i>Haemophilus influenzae</i>	12 days	[90]
<i>Helicobacter pylori</i>	≤ 90 minutes	[23]
<i>Klebsiella</i> spp.	2 hours to > 30 months	[12, 16, 28, 52, 90]
<i>Listeria</i> spp.	1 day – months	[15, 90, 102]
<i>Mycobacterium bovis</i>	> 2 months	[13, 90]
<i>Mycobacterium tuberculosis</i>	1 day – 4 months	[30, 90]
<i>Neisseria gonorrhoeae</i>	1 – 3 days	[24, 27, 90]
<i>Proteus vulgaris</i>	1 – 2 days	[90]
<i>Pseudomonas aeruginosa</i>	6 hours – 16 months; on dry floor: 5 weeks	[12, 16, 28, 52, 99, 103, 104]
<i>Salmonella typhi</i>	6 hours – 4 weeks	[90]
<i>Salmonella typhimurium</i>	10 days – 4.2 years	[15, 90, 105]
<i>Salmonella</i> spp.	1 day	[32]
<i>Serratia marcescens</i>	3 days – 2 months; on dry floor: 5 weeks	[12, 90]
<i>Shigella</i> spp.	2 days – 5 months	[90, 106, 107]
<i>Staphylococcus aureus</i> , including MRSA	7 days – 7 months	[9, 10, 16, 52, 99, 108]
<i>Streptococcus pneumoniae</i>	1 – 20 days	[90]
<i>Streptococcus pyogenes</i>	3 days – 6.5 months	[90]
<i>Vibrio cholerae</i>	1 – 7 days	[90, 109]

Keywords:

How long do nosocomial pathogens persist on inanimate surfaces?

A systematic review

A systematic review
Joel Kramer¹, Ingeborg Schoofbe² and Esmar Kampf³

© 2006 The Authors
Journal compilation © 2006 Blackwell Publishing Ltd

Received 18 August 1998

Source: *U.S. Census Bureau, 1997*

Table 3: Persistence of clinically relevant viruses on dry inanimate surfaces.

Type of virus	Duration of persistence (range)	Source
Adenovirus	7 days – 3 months	[32, 34, 38–41, 111]
Astrovirus	7 – 90 days	[38]
Coronavirus	3 hours	[112, 113]
SARS associated virus	72 – 96 hours	[114]
Coxsackie virus	> 2 weeks	[34, 111]
Cytomegalovirus	8 hours	[115]
Echovirus	7 days	[39]
HAV	2 hours – 60 days	[35, 38, 41]
HBV	> 1 week	[116]
HIV	> 7 days	[117–119]
Herpes simplex virus, type 1 and 2	4.5 hours – 8 weeks	[34, 111, 118, 120]
Influenza virus	1 – 2 days	[39, 43, 121, 122]
Norovirus and feline calici virus (FCV)	8 hours – 7 days	[42, 45]
Papillomavirus 16	> 7 days	[123]
Papovavirus	8 days	[118]
Parvovirus	> 1 year	[118]
Poliovirus type 1	4 hours – < 8 days	[35, 118]
Poliovirus type 2	1 day – 8 weeks	[34, 38, 111]
Pseudorabies virus	≥ 7 days	[124]
Respiratory syncytial virus	up to 6 hours	[44]
Rhinovirus	2 hours – 7 days	[33, 125]
Rotavirus	6 – 60 days	[36 – 38, 41]
Vacciniavirus	3 weeks – > 20 weeks	[34, 126]

Keywords:

How long do nosocomial pathogens persist on inanimate surfaces?

A systematic review

A systematic review
Andi Kanner¹, Ingeborg Schoofbe² and Gunter Kumpf³

© 2006 The Authors
Journal compilation © 2006 Blackwell Publishing Ltd

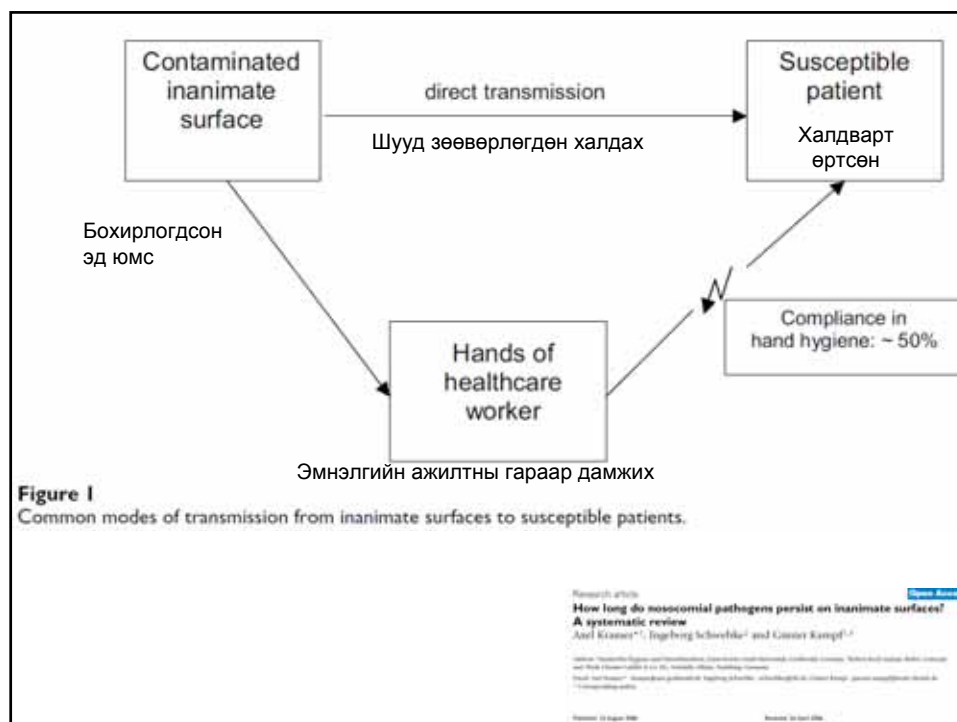


Table 2.2.3. Number and notification rate of hepatitis B cases in the EU and EEA/EFTA, 2006-08

Country	Report type*	2006			2007		2008	
		Total cases	Confirmed cases	Notification rate per 100,000 population	Confirmed cases and notification rate		Confirmed cases and notification rate	
					Cases	Rate	Cases	Rate
Austria	C	43	3	0.04	19	0.23	8	0.00
Belgium	A	122	122	1.1	118	1.1	401	3.8
Bulgaria	A	614	614	8.2	751	9.8	773	10
Cyprus	C	7	7	0.89	13	1.7	7	0.93
Czech Republic	C	—	—	—	—	—	106	3.0
Denmark	C	180	180	3.3	278	5.1	20	0.37
Estonia	C	53	53	4.4	44	3.3	45	3.4
Finland	C	49	49	0.92	24	0.45	0	0.00
France	C	145	145	0.23	156	0.25	182	0.29
Germany	C	822	822	1.0	1 008	1.2	1 129	1.4
Greece	C	80	77	0.60	77	0.60	67	0.60
Hungary	C	88	88	0.88	81	0.80	81	0.81
Ireland	C	82	81	1.0	52	1.1	94	2.2
Italy	C	851	851	1.4	1 097	1.9	1 068	1.8
Latvia	A	140	140	6.2	161	7.2	167	7.3
Lithuania	A	90	90	2.7	84	2.5	8	0.00
Luxembourg	C	31	31	4.3	14	2.0	9	1.0
Malta	C	4	4	0.07	3	0.40	3	0.40
Netherlands	C	225	225	1.4	224	1.4	263	1.6
Poland	A	262	165	0.63	269	0.71	362	0.95
Portugal	C	53	52	0.49	64	0.60	49	0.38
Romania	C	718	718	3.3	927	4.3	1 279	5.9
Slovakia	C	113	111	3.1	103	1.0	123	2.3
Slovenia	C	17	17	0.85	16	0.80	26	1.3
Spain	C	111	79	1.7	441	1.5	490	1.7
Sweden	C	177	177	1.9	201	2.2	161	1.8
United Kingdom	C	420	620	1.0	—	—	—	—
EU total	—	6 347	6 205	1.37	6 452	1.53	7 154	1.65
Iceland	C	61	61	19	47	15	11	3.7
Liechtenstein	—	—	—	—	—	—	—	—
Norway	C	103	103	2.17	120	2.6	149	3.2
Total	—	6 613	6 369	1.29	6 608	1.54	7 316	1.67

Source: Customs reports. TB: Aggregated data report. C: Case-based report. — No report in Unswilled

Table 2.2.3. Number and notification rate of hepatitis B cases in the EU and EEA/EFTA, 2006–08

Country	Report type ^a	2006			2007		2008	
		Total cases	Confirmed cases	Notification rate per 100,000 population	Confirmed cases and notification rate		Confirmed cases and notification rate	
					Cases	Rate	Cases	Rate
Austria	C	43	3	0.04	19	0.23	0	0.00
Belgium	A	122	122	1.1	118	1.3	401	3.8
Bulgaria	A	614	614	8.2	751	9.8	773	10
Cyprus	C	7	7	8.99	13	1.7	7	0.91
Czech Republic	C	—	—	—	—	—	306	3.0
Denmark	C	180	180	3.3	278	5.1	20	0.37
Estonia	C	53	53	4.8	44	3.3	45	3.4
Finland	C	49	49	0.92	24	0.45	0	0.00
France	C	145	145	0.23	154	0.25	182	0.29
Germany	C	822	822	1.0	1 008	1.2	1 129	1.4
Greece	C	80	77	0.49	77	0.49	47	0.40
Hungary	C	88	88	0.88	81	0.80	83	0.82
Ireland	C	82	82	1.9	53	1.2	94	2.2
Italy	C	855	855	1.4	1 097	1.9	1 048	1.8
Latvia	A	140	140	6.2	165	7.2	167	7.3
Lithuania	A	90	90	2.4	81	2.2	0	0.00
Luxembourg	C	21	21	4	—	—	—	—
Malta	C	4	4	0	—	—	—	—
Netherlands	C	225	225	1	—	—	—	—
Poland	A	262	262	0	—	—	—	—
Portugal	C	53	53	0	—	—	—	—
Romania	C	718	718	3	—	—	—	—
Slovakia	C	112	112	2	—	—	—	—
Slovenia	C	12	12	0	—	—	—	—
Spain	C	—	218	1	—	—	—	—
Sweden	C	177	177	1	—	—	—	—
United Kingdom	C	420	420	1	—	—	—	—
EU total	—	6 347	6 205	1.0	6 409	1.54	7 314	1.67
Iceland	C	61	61	19	47	15	11	3.7
Liechtenstein	—	—	—	—	—	—	—	—
Norway	C	103	103	2.17	120	2.6	149	3.2
Total	—	6 511	6 369	1.39	6 499	1.54	7 314	1.67

Source: Country reports. ^aA: Aggregated data reports; C: Case-based reports; —: No reports; 0: Unspecified.

Гепатит В

Цусаар дамжих.

Вакцин байгаа!

Эмнэлгийн ажилчид илүү их эрсдэлтэй Монгол: 20% нь вирус тээгч!

2010 онд 750 тохиолдол шинээр

бүртгэгдсэн.

Энэ нь 100,000 хүнд 27 тохиолдол.

Table 2.3.2. Number and notification rate of human brucellosis cases in the EU and EEA/EFTA, 2006–08

Country	Report type ^a	2006			2007		2008	
		Total cases	Confirmed cases	Notification rate per 100,000 population	Confirmed cases and notification rate		Confirmed cases and notification rate	
					Cases	Rate	Cases	Rate
Austria	C	5	5	10.1	0	0.00	1	10.1
Belgium	A	1	1	10.1	3	10.1	3	10.1
Bulgaria	A	19	8	8.10	9	0.12	3	10.1
Cyprus	C	0	0	0.00	0	0.00	0	0.00
Czech Republic	C	1	1	10.1	0	0.00	0	0.00
Denmark	—	—	—	—	—	—	—	—
Estonia	C	0	0	0.00	0	0.00	0	0.00
Finland	C	0	0	0.00	2	10.1	0	0.00
France	C	21	21	10.1	14	10.1	24	10.1
Germany	C	24	24	10.1	21	10.1	32	10.1
Greece	C	344	304	2.7	101	0.90	121	1.1
Hungary	C	0	0	0.00	1	10.1	—	—
Ireland	C	3	2	10.1	2	0.16	4	0.10
Italy	C	143	143	0.27	179	0.30	454	0.78
Latvia	C	0	0	0.00	0	0.00	0	0.00
Lithuania	A	0	0	0.00	0	0.00	0	0.00
Luxembourg	C	0	0	0.00	0	0.00	0	0.00
Malta	C	0	0	0.00	0	0.00	0	0.00
Netherlands	C	0	3	10.1	2	10.1	6	10.1
Poland	C	4	1	0.00	1	0.00	0	0.00
Portugal	C	54	54	0.53	24	0.70	76	0.72
Romania	C	2	2	10.1	2	10.1	1	10.1
Slovakia	C	1	1	10.1	0	0.00	0	0.00
Slovenia	C	2	2	0.10	1	10.1	0	0.00
Spain	C	—	—	0.26	201	0.45	196	0.45
Sweden	C	0	0	10.1	0	10.1	4	10.1
United Kingdom	C	13	13	10.1	13	10.1	20	10.1
EU total	—	843	735	0.15	639	0.13	952	0.38
Iceland	C	0	0	0.00	0	0.00	0	0.00
Liechtenstein	C	0	0	0.00	0	0.00	—	—
Norway	C	0	0	0.00	0	0.00	3	10.1
Total	—	843	735	0.15	639	0.13	954	0.38

Source: Country reports. ^aA: Aggregated data reports; C: Case-based reports; —: No reports; 0: Unspecified.

Table 2.3.1. Number and notification rate of human brucellosis cases in the EU and EEA/EFTA, 2006–08

Country	Report type ^a	2008			2007		2006	
		Total cases	Confirmed cases	Notification rate per 100 000 population	Confirmed cases and notification rate	Cases	Rate	Rate
Austria	C	5	5	0.3	0	0.00	1	0.3
Belgium	A	1	1	0.3	3	0.3	2	0.3
Bulgaria	A	19	8	0.10	9	0.12	3	0.3
Cyprus	C	0	0	0.00	0	0.00	0	0.00
Czech Republic	C	1	1	0.1	0	0.00	0	0.00
Denmark	—	—	—	—	—	—	—	—
Estonia	C	0	0	0.00	0	0.00	0	0.00
Finland	C	0	0	0.00	2	0.3	0	0.00
France	C	21	21	0.3	16	0.3	24	0.3
Germany	C	24	24	0.3	21	0.3	37	0.3
Greece	C	344	304	2.7	101	0.90	121	1.1
Hungary	C	0	0	0.00	1	0.1	—	—
Ireland	C	3	2	0.3	2	0.36	4	0.10
Italy	C	163	163	0.27	179	0.30	454	0.78
Latvia	C	0	0	0.00	0	0.00	0	0.00
Lithuania	A	0	0	0.00	0	0.00	0	0.00
Luxembourg	C	0	0	0.0	—	—	—	—
Malta	C	0	0	0.0	—	—	—	—
Netherlands	C	8	3	0.3	—	—	—	—
Poland	C	4	1	0.4	—	—	—	—
Portugal	C	54	54	0.3	—	—	—	—
Romania	C	2	2	0.0	—	—	—	—
Slovakia	C	1	1	0.1	—	—	—	—
Slovenia	C	2	2	0.1	—	—	—	—
Spain	C	—	—	0.0	—	—	—	—
Sweden	C	0	0	0.0	0	0.0	4	0.3
United Kingdom	C	13	13	0.3	13	0.3	20	0.3
EU total		843	735	0.15	639	0.13	954	0.28
Iceland	C	0	0	0.00	0	0.00	0	0.00
Liechtenstein	C	0	0	0.00	0	0.00	—	—
Norway	C	0	0	0.00	0	0.00	3	0.3
Total		843	735	0.15	639	0.13	954	0.28

Source: Country reports. ^aA: Aggregated data report; C: Case-based report; —: No report; 0: Unspecified.**Бруцеллёз**

Монгол Улс мал аж ахуйн орон учраас өндөр эрсдэлтэй.

Ариутгаж сэргийлэх боломжтой.

Эмнэлэгт хоол хүнснээр дамжин халдварлаж болзошгүй.

Table 2.3.12. Number and notification rate of salmonellosis cases in the EU and EEA/EFTA, 2006–08

Country	Report type ^a	2008			2007		2006	
		Total cases	Confirmed cases	Notification rate per 100 000 population	Confirmed cases and notification rate	Cases	Rate	Rate
Austria	C	2 312	2 312	28	3 380	41	4 787	58
Belgium	C	3 931	3 931	34	3 915	37	3 630	35
Bulgaria	A	1 422	1 546	20	1 138	15	1 056	14
Cyprus	C	169	169	21	158	20	99	13
Czech Republic	C	10 872	10 707	103	12 455	123	24 184	236
Denmark	C	3 640	3 640	62	1 648	30	1 642	31
Estonia	C	647	647	68	428	33	453	34
Finland	C	3 126	3 126	59	2 738	52	0	0.00
France	C	7 184	7 184	11	5 313	8.4	6 008	9.5
Germany	C	42 909	42 909	52	55 399	62	52 575	64
Greece	C	817	795	7.3	704	6.3	890	8.0
Hungary	C	7 164	6 637	66	6 578	65	9 389	93
Ireland	C	447	447	10	440	10	420	10
Italy	C	6 642	6 642	11	4 731	31	6 272	11
Latvia	C	1 220	1 220	54	618	27	781	34
Lithuania	C	3 308	3 308	68	2 370	62	3 557	105
Luxembourg	C	153	153	32	163	34	308	64
Malta	C	181	181	39	85	21	63	16
Netherlands ^(b)	C	1 427	1 427	—	1 224	—	1 444	—
Poland	A	8 409	9 148	24	11 955	29	12 502	33
Portugal	C	348	332	3.1	438	4.1	387	3.7
Romania	A	624	624	2.9	620	2.9	645	3.0
Slovakia	C	7 336	6 849	127	8 167	155	8 101	153
Slovenia	C	1 033	1 033	31	1 334	42	1 539	26
Spain ^(c)	C	3 833	3 833	—	3 842	—	3 117	—
Sweden	C	4 185	4 185	46	3 930	43	4 056	45
United Kingdom	C	11 511	11 511	19	13 517	22	14 124	23
EU total		136 392	134 606	20.42^(d)	153 013	34.1^(e)	164 321	36.38^(f)
Iceland	C	134	134	43	83	30	114	38
Liechtenstein	C	2	2	5.2	1	2.0	—	—
Norway	C	1 941	1 941	45	1 649	35	1 813	39
Total		138 468	136 681	20.23^(g)	154 758	34.1^(h)	166 248	36.41⁽ⁱ⁾

Source: Country reports. ^aA: Aggregated data report; C: Case-based report; —: No report; 0: Unspecified.^(b) Coverage by the Dutch sentinel system is about 84 %.^(c) Surveillance system currently estimated to cover 25 % of the total population.^(d) Data calculated including the Dutch and Spanish data.

Table 2.3.12. Number and notification rate of salmonellosis cases in the EU and EEA/EFTA, 2006–08

Country	Report type ^a	2006			2007		2008	
		Total cases	Confirmed cases	Notification rate per 100,000 population	Confirmed cases and notification rate		Confirmed cases and notification rate	
					Cases	Rate	Cases	Rate
Austria	C	2 312	2 312	28	3 386	41	4 787	58
Belgium	C	3 831	3 831	34	3 915	37	3 690	35
Bulgaria	A	1 422	1 535	20	1 136	15	1 056	14
Cyprus	C	169	169	21	158	20	99	13
Czech Republic	C	10 872	10 707	103	12 451	123	20 184	234
Denmark	C	3 649	3 649	67	1 648	30	1 662	31
Estonia	C	647	647	68	428	52	453	54
Finland	C	3 126	3 126	59	2 738	52	0	0.00
France	C	7 194	7 184	11	5 313	8.4	6 008	9.5
Germany	C	62 909	62 909	52	55 389	67	52 575	64
Greece	C	817	795	7.3	704	6.3	890	8.0
Hungary	C	7 166	6 837	66	6 578	65	9 389	93
Ireland	C	447	447	10	440	10	620	10
Italy	C	8 482	8 482	11	6 731	33	6 373	31
Latvia	C	1 220	1 220	54	618	27	781	34
Lithuania	C	3 308	3 308	68	2 320	67	3 557	105
Luxembourg	C	193	193					
Malta	C	181	181					
Netherlands ^b	C	1 427	1 427					
Poland	A	8 409	8 148					
Portugal	C	348	332					
Romania	A	624	624					
Slovakia	C	7 336	6 849					
Slovenia	C	1 833	1 833					
Spain ^c	C	3 833	3 833					
Sweden	C	4 185	4 185					
United Kingdom	C	11 511	11 511					
EU total		136 392	134 606	28.2 ^d	133 813	34.1 ^e	149 324	38.3 ^f
Iceland	C	134	134	43	83	30	114	38
Liechtenstein	C	2	2	5.7	1	2.8	—	—
Norway	C	1 941	1 941	47	1 449	35	1 813	39
Total		138 469	136 681	29.23 ^d	135 756	34.1 ^e	151 248	38.41 ^f

Source: Country reports. ^aB: Aggregated data report; C: Case-based report; —: No report; D: Unspecified.
^(a) Countries by the Dutch surveillance system is about 84 %.
^(b) Surveillance system currently estimated to cover 15 % of the total population.
^(c) Data is calculated including the Dutch and Spanish data.

Салмонеллёз

Монгол дахь эрсдэл?

Өндөг, тахиа, зарим махаар халдвар дамжих өндөр эрсдэлтэй.

Буцалгаж хэрэглэх нь чухал!

Эмнэлэгт хоол хүнснээр дамжиж халдварлах боломжтой.

2.6 Antimicrobial resistance and healthcare-associated infections

Antimicrobial resistance and healthcare-associated infections.

Нянгийн эсрэг эмэнд тэсвэржилт ба эмнэлгийн үйлчилгээтэй холбоотой халдварууд

Based on data reported to EARSS in 2009, the main conclusions were:

- Antimicrobial resistance represents an increasingly important public health hazard in Europe.
- The proportions of antibiotic resistance among indicator bacteria isolated from blood and cerebrospinal fluid samples showed wide variations across European countries.
- *Escherichia coli*, the most frequent Gram-negative bacteria responsible for bloodstream infection and urinary tract infection, showed a Europe-wide increase of resistance to all antibiotic classes under surveillance.
- Multidrug resistance (resistance to multiple antibiotics), which is often observed in some Gram-negative bacteria such as *E. coli*, *K. pneumoniae* and *P. aeruginosa*, further increases the threat posed by antibiotic resistance since it limits the number of options for treating infections.
- A decrease of the proportion of MRSA was reported by some countries, although proportions of MRSA remained above 25 % in one third of the countries.
- International cooperation and concerted, multi-disciplinary efforts are needed to contain and prevent the spread of antibiotic resistance.

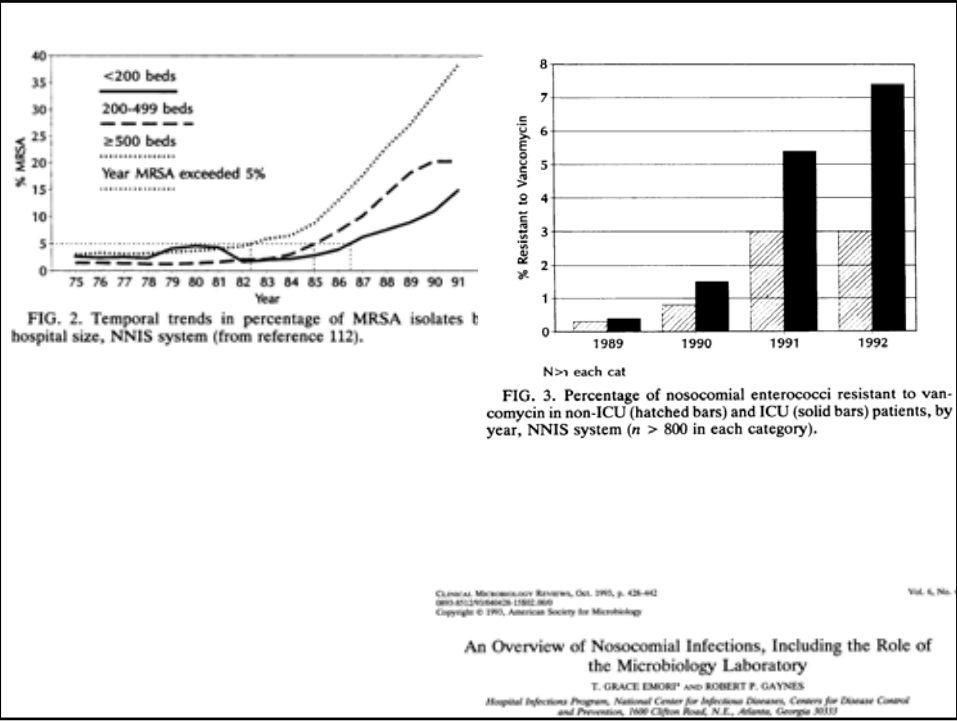
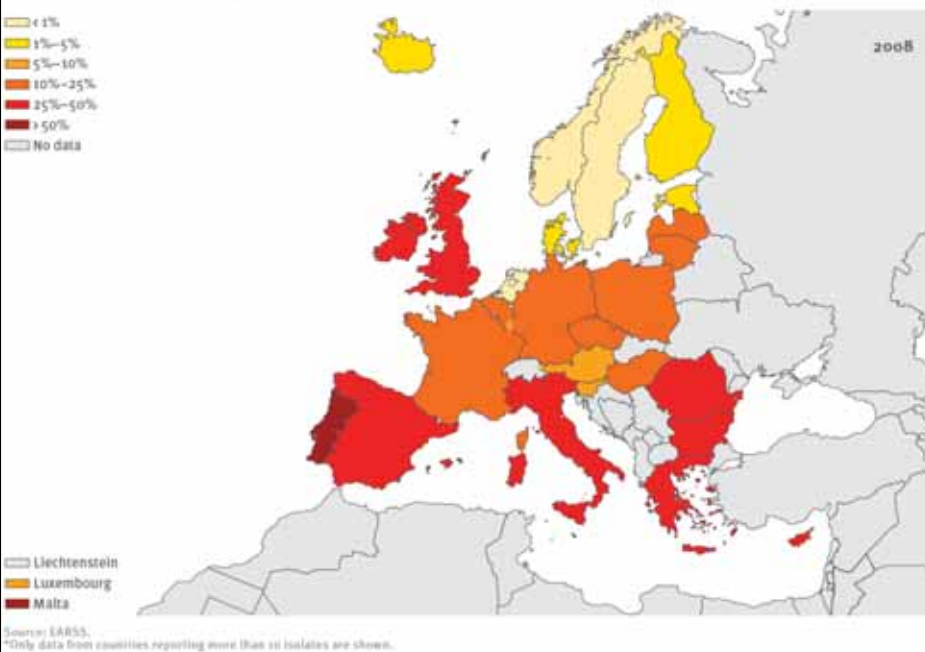
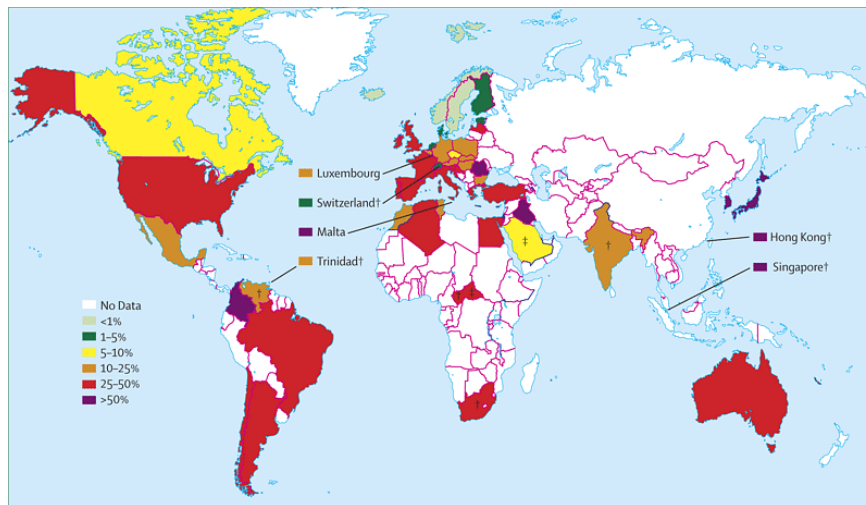


Figure 2.6.2. *Staphylococcus aureus*: proportion of blood and cerebrospinal fluid isolates resistant to methicillin in EU and EEA/EFTA countries*, 2008





Weltweite Prävalenz von MRSA
(Grundmann et al., Lancet 368, 2006, 874-885)

19

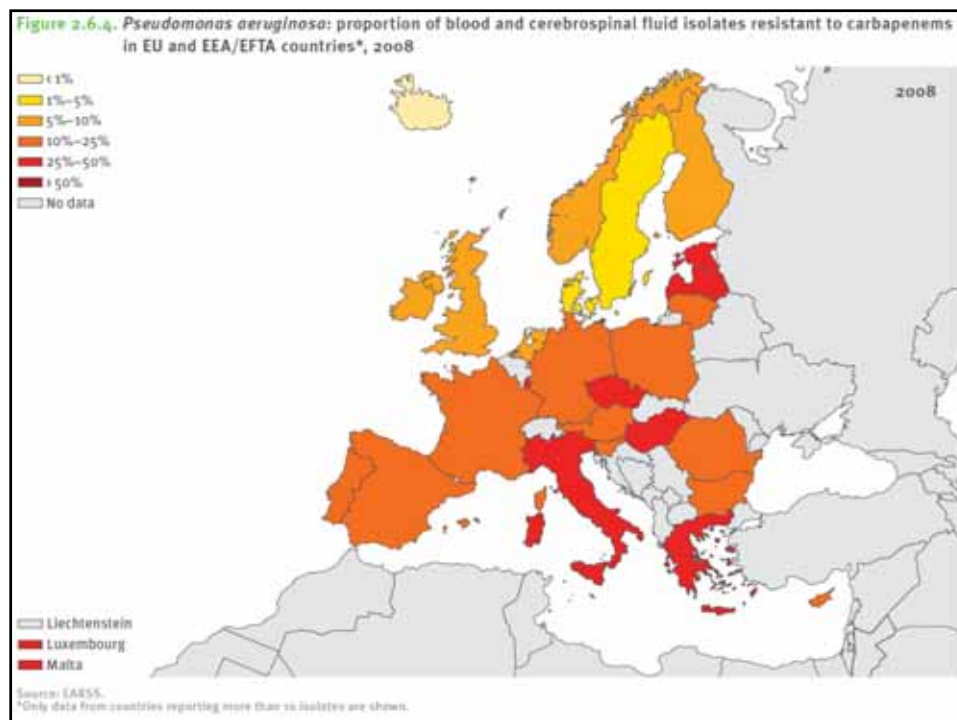


Table 3.6.1. Proportion of resistant isolates (median and range) in indicator micro-organisms isolated from blood and spinal fluid

Species, antimicrobial resistance	% R ^{II} , 2007 median [Range]		No. countries ^{III}	No. Countries with:	
				Upward trend ^{IV}	Downward trend ^{IV}
<i>Streptococcus pneumoniae</i> , Penicillin-R or I ^{III} (PNSP)	7	[0–34]	27	1	3
<i>S. pneumoniae</i> , Erythromycin-R	15	[0–36]	26	4	2
<i>Escherichia coli</i> , Aminopenicillin-R	54	[33–77]	28	19	0
<i>E. coli</i> , Third-generation cephalosporin-R	6	[1–28]	28	19	1
<i>E. coli</i> , Aminoglycoside-R	7	[2–38]	28	16	0
<i>E. coli</i> , Fluoroquinolone-R	19	[7–40]	28	24	0
<i>Staphylococcus aureus</i> , Methicillin-R (MRSA)	16	[0–52]	28	7	4
<i>S. aureus</i> , Vancomycin-R	0	[0–0]	27	— ^{III}	—
<i>Enterococcus faecium</i> , Aminoglycoside-R (high level)	49	[14–90]	23	—	—
<i>E. faecium</i> , Vancomycin-R	11	[0–37]	26	4	2
<i>Enterococcus faecalis</i> , Aminoglycoside-R (high level)	38	[13–67]	23	5	1
<i>E. faecalis</i> , Vancomycin-R	0	[0–7]	27	—	—
<i>Klebsiella pneumoniae</i> , Third-generation cephalosporin-R	10	[0–80]	27	—	—
<i>K. pneumoniae</i> , Carbapenem-R	0	[0–42]	27	—	—
<i>K. pneumoniae</i> , Aminoglycoside-R	10	[0–80]	27	—	—
<i>K. pneumoniae</i> , Fluoroquinolone-R	13	[0–55]	27	—	—
<i>Pseudomonas aeruginosa</i> , Piperacillin- or Pip.-Tazobactam-R	11	[0–38]	26	—	—
<i>P. aeruginosa</i> , Ceftazidime-R	7	[0–40]	26	—	—
<i>P. aeruginosa</i> , Carbapenem-R	14	[0–47]	25	—	—
<i>P. aeruginosa</i> , Aminoglycoside-R	13	[0–49]	26	—	—
<i>P. aeruginosa</i> , Fluoroquinolone-R	17	[0–50]	26	—	—

Source: EARS Interactive Database and EARS Annual Report 2007.

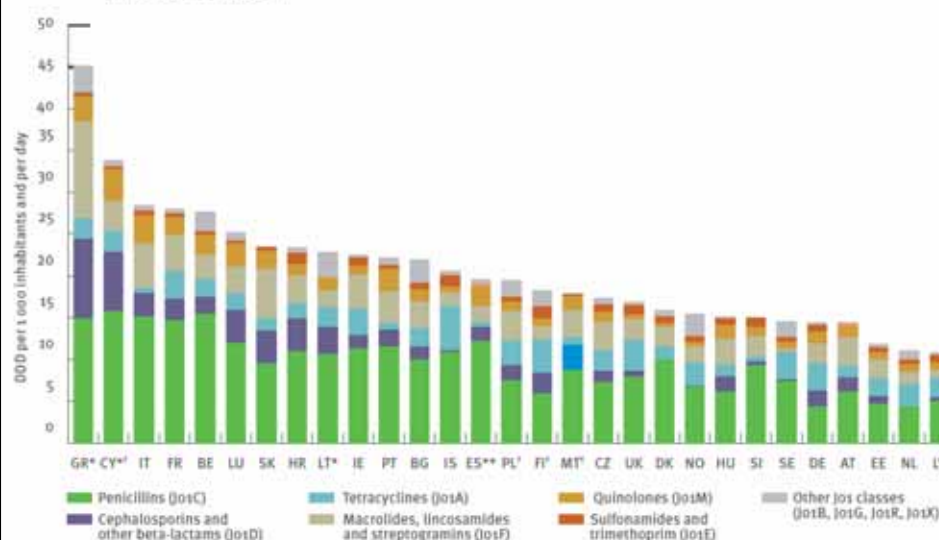
^{II} R: resistant; I: intermediate.

^{III} Only data from countries that reported more than 10 isolates are included.

^{IV} Only countries with significant trends are reported. Surveillance period: *Streptococcus pneumoniae* and *Staphylococcus aureus*, 1999–2007; *Enterococcus*, 2001–2007.

^V Not available.

Figure 2.6.5. Outpatient antibiotic (ATC group J01) use subdivided into major antibiotic classes according to ATC classification, 2008



Микробиологийн лаборатори

Бактери, вирус, мөөгөнцөрийг оношлох
Стандартчилагдсан аргууд
Чанарын хяналт (гадаад, дотоод)
Антобитикт тэсвэртэй байдал
Статистик мэдээ



23

VOL. 6, 1993

OVERVIEW OF NOSOCOMIAL INFECTIONS 429

TABLE 1. Estimated extra days, extra charges, and deaths attributable to nosocomial infections annually in U.S. hospitals*

Infection type	Avg extra days in hospital per infection	Avg extra charges per infection (1992 dollars)	Deaths directly caused by infections		Deaths to which infections contributed	
			%	Estimated U.S. total	%	Estimated U.S. total
SSI	7.3	\$3,152	0.6	3,251	1.9	9,726
Pneumonia	5.9	\$5,683	3.1	7,087	10.1	22,983
BSI	7.4	\$3,517	4.4	4,496	8.6	8,844
UTI	1.0	\$ 680	0.1	947	0.7	6,503
Other	4.8	\$1,617	0.8	3,246	2.5	10,036
All	4.0	\$2,100	0.9	19,027	2.7	58,092

* Adapted from reference 97.

Clinical Microbiology Reviews, Oct. 1993, p. 428-442
0893-4012/93/060428-15\$02.00/0
Copyright © 1993, American Society for Microbiology

Vol. 6, No.

An Overview of Nosocomial Infections, Including the Role of the Microbiology Laboratory

T. GRACE EMORI* AND ROBERT F. GAYNES

Hospital Infections Program, National Center for Infectious Diseases, Centers for Disease Control and Prevention, 1600 Clifton Road, N.E., Atlanta, Georgia 30333

TABLE 3. Distribution of major infection sites for all patients and by major services, 1990 through 1992, hospital-wide component, NNIS system

Infection type	% of cases						
	All patients (n = 62,305)	General surgery (n = 26,408)	Medical (n = 26,178)	Newborn (n = 3,220)	Obstetric (n = 2,931)	Gynecology (n = 1,882)	Pediatric (n = 1,586)
UTI	33.1	30.2	42.1	4.2	16.5	39.7	12.7
Pneumonia	15.5	16.4	17.0	14.9	2.3	6.5	12.7
SSI	14.9	24.5	2.3	1.8	45.0	37.2	6.1
Primary BSI	13.1	9.5	14.8	36.1	2.2	3.9	29.7
Other	23.4	19.4	23.8	43.1	34.0	12.7	38.8

Clinical Microbiology Reviews, Oct. 1993, p. 428-442
 0893-4012/93/060428-15\$02.00/0
 Copyright © 1993, American Society for Microbiology

Vol. 6, No.

An Overview of Nosocomial Infections, Including the Role of the Microbiology Laboratory

T. GRACE EMORI* AND ROBERT F. GAYNES

Hospital Infections Program, National Center for Infectious Diseases, Centers for Disease Control and Prevention, 1600 Clifton Road, N.E., Atlanta, Georgia 30333

TABLE 5. Distribution of nosocomial pathogens isolated from major infection sites, 1990 through 1992, hospital-wide component, NNIS system*

Pathogen	% of isolates					
	All sites (70,411 isolates)	UTI (25,371 isolates)	SSI (11,724 isolates)	BSI (9,444 isolates)	Pneumonia (8,891 isolates)	Other (14,961 isolates)
<i>Escherichia coli</i>	12	25	8	5	4	4
<i>Staphylococcus aureus</i>	12	2	19	16	20	17
CoNS	11	4	14	31	2	14
<i>Enterococcus</i> spp.	10	16	12	9	2	5
<i>Pseudomonas aeruginosa</i>	9	11	8	3	16	6
<i>Enterobacter</i> spp.	6	5	7	4	11	4
<i>Candida albicans</i>	5	8	3	5	5	5
<i>Klebsiella pneumoniae</i>	5	7	3	4	7	3
Gram-positive anaerobes	4	0	1	1	0	19
<i>Proteus mirabilis</i>	3	5	3	1	2	2
Other <i>Streptococcus</i> spp.	2	1	3	4	1	2
Other <i>Candida</i> spp.	2	2	1	3	1	1
Other fungi	2	3	0	1	1	1
<i>Acinetobacter</i> spp.	1	1	1	2	4	1
<i>Serratia marcescens</i>	1	1	1	1	3	1
<i>Citrobacter</i> spp.	1	2	1	1	1	1
Other non- <i>Enterobacteriaceae</i> —aerobes	1	0	1	1	4	2
Group D streptococci	1	2	2	1	0	1
Group B streptococci	1	1	1	2	1	1
<i>Haemophilus influenzae</i>	1	.	0	0	5	2
Other <i>Klebsiella</i> spp.	1	1	1	1	2	1
Other <i>Enterobacteriaceae</i> —aerobes	1	1	1	0	1	1
Other gram-positive anaerobes	1	0	2	1	0	1
Viruses	1	0	0	0	1	2
<i>Bacillus fragilis</i>	1	0	2	1	0	0

* Pathogens that constituted less than 1% of isolates from all sites are not included.

Clinical Microbiology Reviews, Oct. 1993, p. 428-442
 0893-4012/93/060428-15\$02.00/0
 Copyright © 1993, American Society for Microbiology

Vol. 6, No.

An Overview of Nosocomial Infections, Including the Role of the Microbiology Laboratory

T. GRACE EMORI* AND ROBERT F. GAYNES

Hospital Infections Program, National Center for Infectious Diseases, Centers for Disease Control and Prevention, 1600 Clifton Road, N.E., Atlanta, Georgia 30333

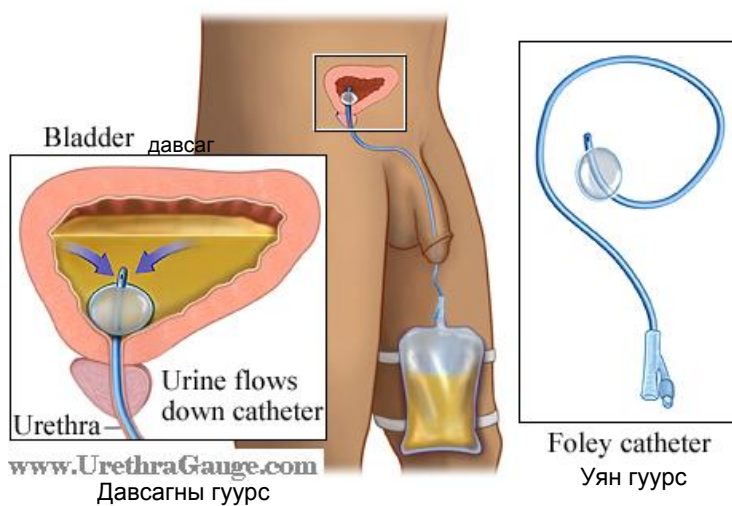
Factors that predispose to nosocomial infection Related to underlying health status Advanced age Malnutrition Alcoholism Heavy smoking Chronic lung disease Diabetes Related to acute disease process Surgery Trauma Burns Related to invasive procedures Endotracheal or nasal intubation Central venous catheterisation Extracorporeal renal support Surgical drains Nasogastric tube Tracheostomy Urinary catheter Related to treatment Blood transfusions Recent antimicrobial therapy Immunosuppressive treatments—eg, corticosteroids Stress-ulcer prophylaxis Recumbent position Parenteral nutrition	Эмнэлгээс шалтгаалах халдвар авахад нөлөөлөх хүчин зүйлүүд Эрүүл мэндийн үндсэн байдал Насжилт Хоол тэжээлийн дутагдал Архидалт Архаг тамхичин Уушгины архаг өвчин Чихрийн шижин Хурц халдварт өвчний улмаас Мэс засал Гэмтэл Түлэгдэлт Мэс ажилбарын улмаас Гуурсан хоолойн ба хамрын интубаци Гол хураагуур судасны катетр Бөөрний үйл ажиллагааг гаднаас дэмжих буюу гемодиализ Мэс ажилбарын дренаж Хамар хоолойн гуурс Трахеостомия Давсаганд гуурс тавих Эмчилгээний үйл ажиллагаатай холбоотой Цус сэлбэх Микробын эсрэг эмчилгээ Дархлаа сэргээх эмчилгээ Хөхүүд байх
--	---

Review
Nosocomial Infections in Adult Intensive-Care
Lancet 2003; 361: 2068–77





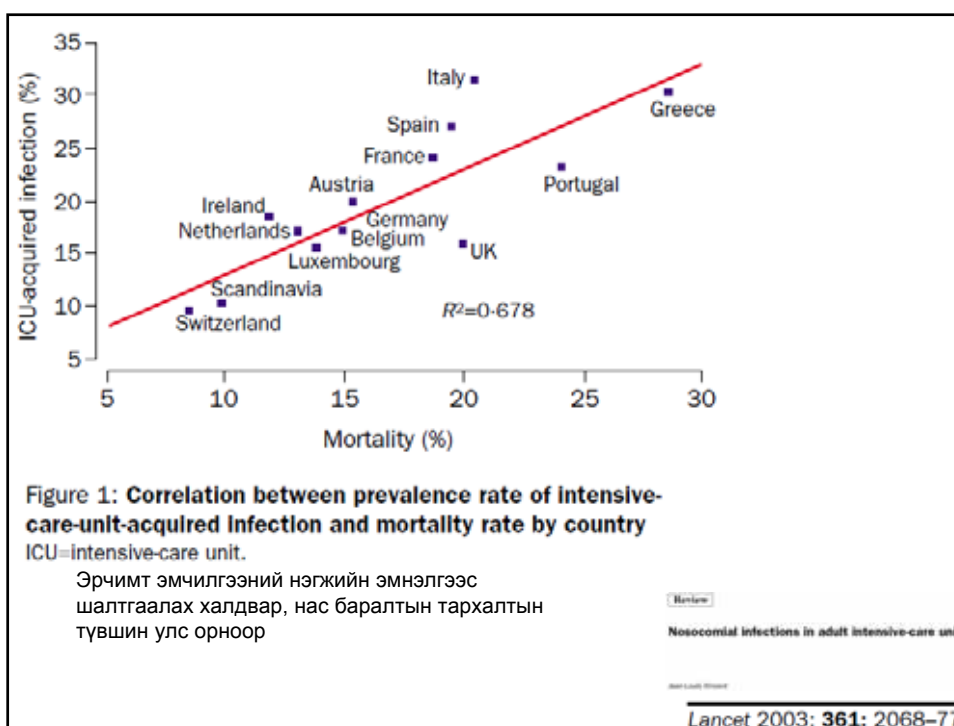
29

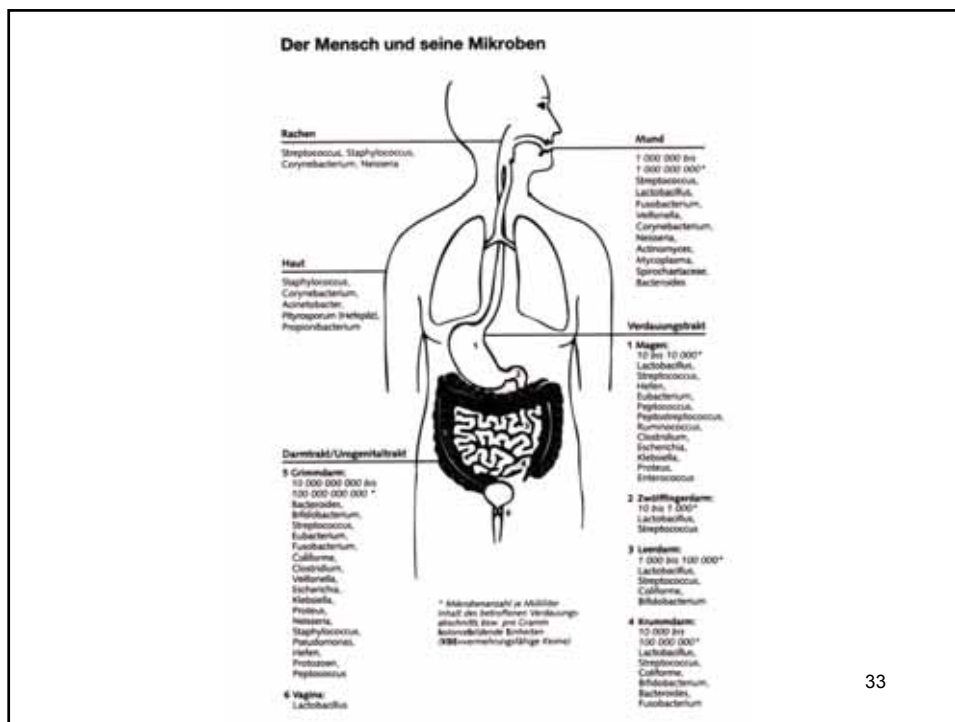


30



31





33

Healthcare-associated infections

Эмнэлгийн тусламжийн үйл ажиллагаатай холбоотой халдвар

- Surveillance of healthcare-associated infections in Europe is slowly extending with, in 2008, 17 countries having implemented surveillance of surgical site infections and/or surveillance of infections acquired in intensive care units following European standardised protocols.
- Decreasing trends previously observed for surgical site infections following hip prosthesis were confirmed in 2008.
- The distribution of micro-organisms associated with infections acquired in intensive care units showed a high proportion of third-generation cephalosporin-resistant Enterobacteriaceae, and in particular among *Klebsiella* spp. and *Enterobacter* spp.

34

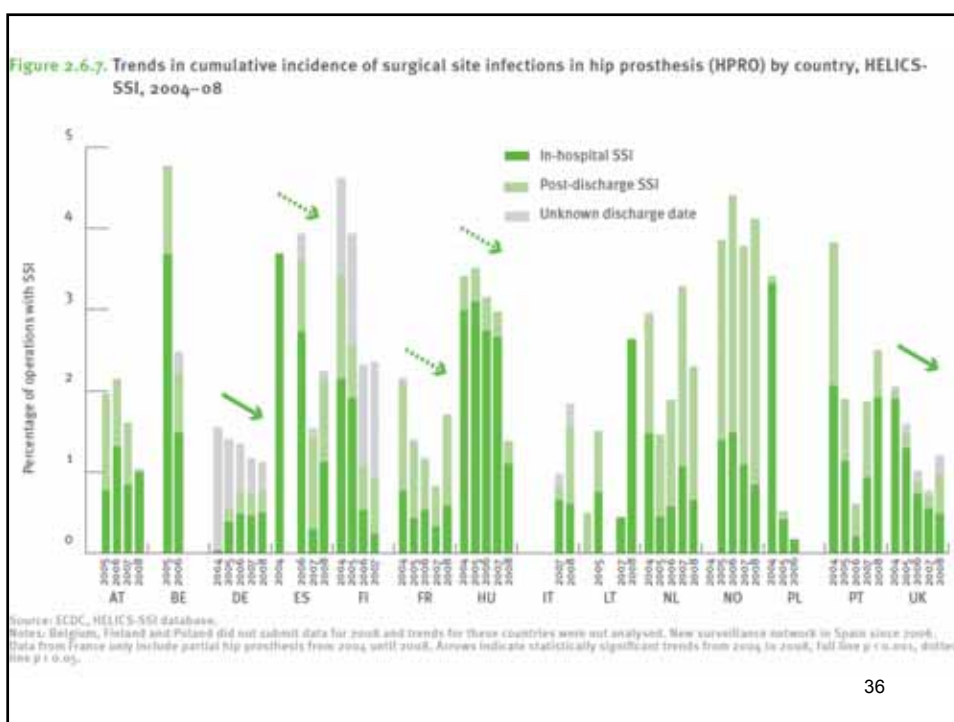
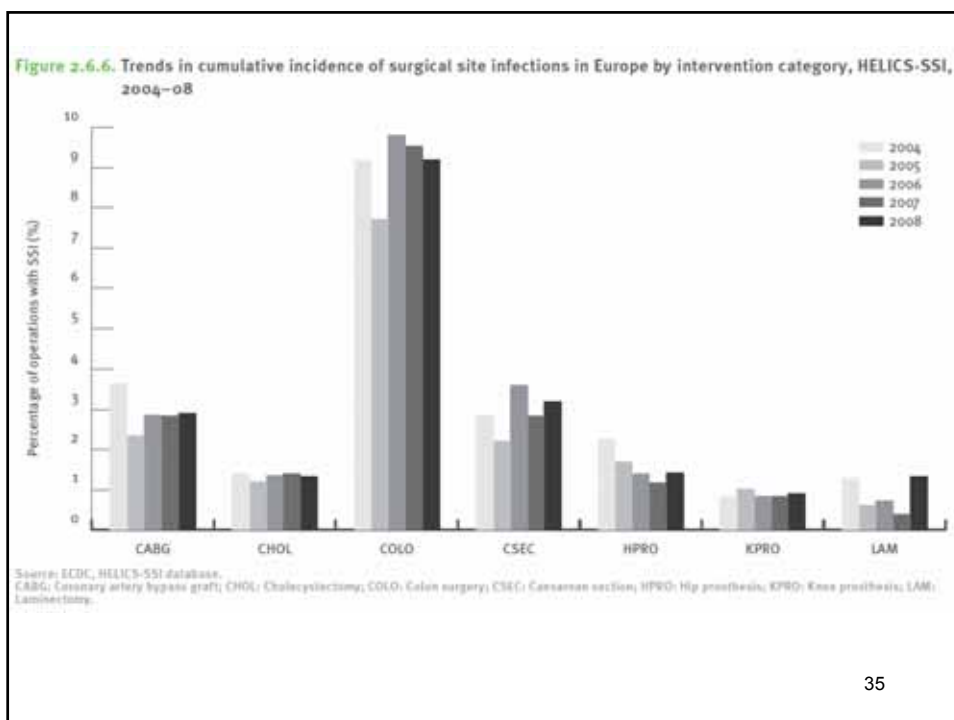


Table 2.6.1. Number of interventions included in surveillance of surgical site infections according to HELICS-SSI by category and country, 2008

	Number of hospitals	CABG	CHOL	COLO	CSEC	HPRD	KPRO	LAM	Total
Austria	31	209	259	398	3 248	3 694	220	—	8 028
France	605	1178	11 193	6 274	16 729	19 074	9 291	1 182	64 921
Germany	220	9 505	8 515	6 105	11 319	23 350	12 709	2 239	73 742
Hungary	25	228	1 599	211	3 210	731	219	88	6 286
Italy	138	758	4 358	2 205	8 160	1 804	1 079	706	19 070
Lithuania	5	483	656	219	241	38	23	0	1 660
Malta	1	73	0	0	0	0	0	0	73
Netherlands	33	0	1 117	1 183	1 434	6 443	4 110	120	14 407
Norway	54	718	346	0	1 970	1 893	0	0	4 927
Portugal	15	13	1 745	695	1 079	573	0	146	4 201
Spain	33	551	1 623	1 236	1 403	1 784	1 095	263	7 955
United Kingdom*	262	4 224	—	2 236	15 580	38 195	41 116	0	101 351
Total	1 422	17 940	31 411	20 762	64 373	97 529	69 862	4 744	306 621

Source: ECDC, HELICS-SSI database.

* Compiles orthopaedic surgery data from England, Northern Ireland, Scotland and Wales, CABG and COLO data from England and CSEC data from Scotland and Wales.
CABG: Coronary artery bypass graft; CHOL: Cholecystectomy; COLO: Colon surgery; CSEC: Caesarean section; HPRD: Hip prosthesis; KPRO: Knee prosthesis; LAM: Laminectomy; —: no data.

37

Table 2.6.2. Fifteen most frequently isolated micro-organisms in ICU-acquired pneumonia by country, surveillance of ICU-acquired infections, 2008

	Austria	Belgium	Estonia	France	Germany	Italy	Lithuania	Luxembourg	Portugal	Slovakia	Spain	UK	Total
Number of isolates	167	775	5	3 038	4 143	131	19	64	391	57	1701	47	10 538
<i>Pseudomonas aeruginosa</i>	13.8%	18.6%	60.0%	21.2%	15.5%	26.0%	5.3%	18.8%	23.5%	22.8%	18.2%	2.1%	18.2%
<i>Staphylococcus aureus</i>	6.6%	7.1%	0.0%	19.3%	18.1%	9.9%	21.1%	10.9%	17.6%	7.0%	12.4%	14.9%	16.3%
<i>Escherichia coli</i>	4.8%	9.3%	20.0%	10.3%	10.2%	8.4%	5.3%	12.5%	4.3%	12.3%	7.1%	4.3%	9.3%
<i>Klebsiella</i> spp.	10.8%	11.1%	0.0%	6.3%	9.3%	8.4%	21.1%	9.4%	7.9%	36.8%	5.5%	6.4%	8.1%
<i>Candida</i> spp.	26.3%	2.5%	20.0%	3.9%	11.9%	6.1%	5.3%	6.3%	10.0%	10.5%	5.2%	4.3%	7.9%
<i>Enterobacter</i> spp.	6.6%	11.5%	0.0%	7.2%	7.4%	4.6%	5.3%	10.9%	4.1%	1.8%	5.2%	6.4%	7.1%
<i>Acinetobacter</i> spp.	3.0%	0.9%	0.0%	2.0%	2.4%	16.0%	15.8%	0.0%	14.1%	5.3%	8.2%	0.0%	3.7%
<i>Haemophilus</i> spp.	3.0%	3.2%	0.0%	5.1%	2.4%	0.0%	5.3%	6.3%	2.6%	0.0%	4.9%	4.3%	3.7%
<i>Stenotrophomonas</i> spp.	3.0%	5.8%	0.0%	3.1%	3.3%	6.9%	0.0%	4.7%	3.8%	0.0%	3.8%	0.0%	3.5%
<i>Enterococcus</i> spp.	7.2%	3.9%	0.0%	1.1%	5.4%	0.8%	0.0%	1.6%	0.3%	0.0%	1.6%	0.0%	3.2%
<i>Serratia</i> spp.	0.0%	3.6%	0.0%	2.4%	3.3%	2.3%	0.0%	4.7%	1.5%	0.0%	2.7%	4.3%	2.8%
<i>Proteus</i> spp.	1.2%	3.0%	0.0%	2.9%	3.0%	0.0%	0.0%	1.6%	1.5%	0.0%	2.4%	4.3%	2.7%
Coagulase-negative staphylococci	3.6%	5.9%	0.0%	2.7%	2.0%	3.8%	0.0%	0.0%	0.5%	1.8%	1.6%	0.0%	2.4%
<i>Streptococcus</i> spp.	4.2%	3.4%	0.0%	4.9%	0.0%	2.3%	10.5%	3.1%	1.5%	0.0%	3.1%	4.3%	2.4%
<i>Citrobacter</i> spp.	2.4%	1.5%	0.0%	2.0%	2.3%	0.0%	0.0%	0.0%	0.8%	0.0%	1.0%	0.0%	1.8%

Source: ECDC, HELICS-ICU database.

38

Table 2.6.3. Fifteen most frequently isolated micro-organisms in ICU-acquired bloodstream infections by country, surveillance of ICU-acquired infections, 2008

	Austria	Belgium	France	Germany	Italy	Lithuania	Luxembourg	Portugal	Slovakia	Spain	UK	Total
Number of isolates	27	218	1167	1436	64	23	50	209	23	1058	40	4 315
Coagulase-negative staphylococci	40.7%	19.3%	22.4%	31.4%	28.1%	30.4%	12.0%	23.9%	13.0%	33.3%	20.0%	28.0%
<i>Enterococcus</i> spp.	18.5%	12.4%	8.0%	17.8%	9.4%	4.3%	24.0%	11.5%	8.7%	10.4%	12.5%	12.5%
<i>Staphylococcus aureus</i>	3.7%	7.3%	15.2%	14.3%	4.7%	13.0%	4.0%	11.5%	0.0%	4.5%	27.5%	11.4%
<i>Pseudomonas aeruginosa</i>	11.1%	6.4%	9.9%	5.6%	14.1%	4.3%	8.0%	8.1%	34.8%	8.5%	2.5%	7.9%
<i>Escherichia coli</i>	0.0%	11.0%	9.8%	6.8%	1.6%	0.0%	14.0%	5.3%	8.7%	6.1%	2.5%	7.5%
<i>Klebsiella</i> spp.	3.7%	11.9%	5.2%	5.8%	14.1%	13.0%	14.0%	7.2%	34.8%	6.0%	5.0%	6.5%
<i>Candida</i> spp.	14.8%	8.3%	7.3%	6.5%	7.8%	0.0%	4.0%	9.1%	0.0%	4.3%	7.5%	6.3%
<i>Enterobacter</i> spp.	3.7%	7.8%	6.5%	4.5%	3.1%	0.0%	8.0%	5.3%	0.0%	5.6%	7.5%	5.5%
<i>Acinetobacter</i> spp.	0.0%	1.4%	1.5%	1.0%	12.5%	8.7%	0.0%	5.7%	0.0%	4.2%	0.0%	2.3%
<i>Serratia</i> spp.	0.0%	4.1%	1.2%	1.9%	1.6%	0.0%	4.0%	3.8%	0.0%	1.9%	7.5%	2.0%
<i>Streptococcus</i> spp.	0.0%	2.8%	2.7%	0.0%	1.6%	8.7%	0.0%	1.9%	0.0%	2.0%	2.5%	1.5%
<i>Proteus</i> spp.	0.0%	0.0%	1.5%	1.3%	0.0%	4.3%	2.0%	1.4%	0.0%	0.9%	0.0%	1.2%
<i>Scenotrophomonas</i> spp.	0.0%	0.9%	0.9%	0.8%	0.0%	4.3%	2.0%	1.9%	0.0%	0.8%	0.0%	0.9%
<i>Bacteroides</i> spp.	0.0%	2.3%	1.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.0%	0.7%
<i>Citrobacter</i> spp.	0.0%	0.5%	1.5%	0.2%	0.0%	0.0%	0.0%	0.5%	0.0%	0.7%	0.0%	0.7%

Source: ECDC, REAICS-ICU Database.



Эмнэлгийн тусламжийн үйл ажиллагаатай холбоотой халдварийн тохиолдлын тодорхойлолтууд SSI – Мэс заслын халдвар (Surgical site infection)

Superficial incisional - Өнгөц зүслэгийн халдвар

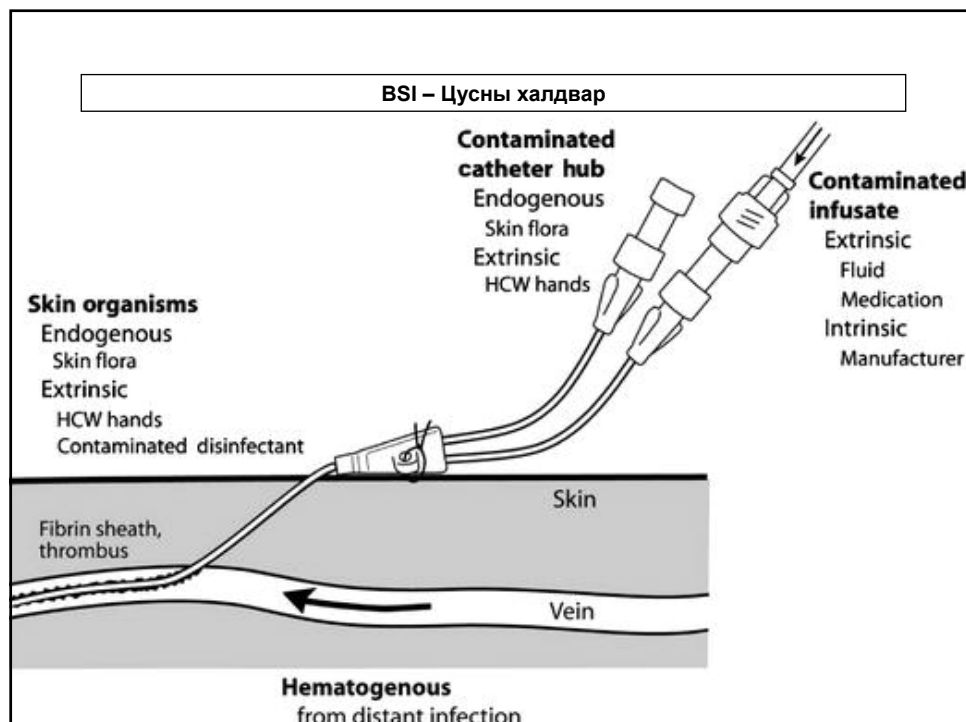
Organ/Space – Эрхтэн/ байр

Deep incisional (SSI-D) – Гүн зүслэгийн халдвар

Ямар нэг эрхтэн шилжүүлж суулгаагүй бол мэс засал хийснээс хойш 30 хоногийн дотор, эрхтэн шилжүүлэн суулгасан бол нэг жилийн дотор халдвар тохиолддог. Мөн халдвар мэс засалтай холбоотойгоор болон зөөлөн эдийн (хальс, булчин) зүслэгээс шалтгаалан дараах хэлбэрээр бүртгэгдэж болно. Үүнд:

1. Мэс заслын шархны гүнээс идээ бээр шингэн гарах
2. Мэс заслын шарх гэнэт задрах, эсвэл дараах шинж тэмдгүүдийн нэг нь л илрэхэд мэс засалчаар яаралтай нээлгэнэ. Үүнд: 38 аас дээш халуурах, хэсэг газар өвдөж зөөлрөх, цусны өсгөврийн тест сөрөг гараагүй тохиолдолд
3. Мэс заслын зүслэгийн шархыг эргэж шалгах, дахин нээх, эд эсийн шинжилгээ, радиологийн шинжилгээ хийх явцад буглаа үүссэн нь шууд тодорхойлогдох
4. Мэс заслын эмч болон эмчлэгч эмч нь “Эмнэлгээс шалтгаалах халдвар” гэж оношилсон байх

41



BSI – Цусан халдвар

Цусны 1 өсгөвөрт эмгэг төрөгч эерэг таництай байх
эсвэл

Өвчтөнд дараах шинж тэмдгүүдийн нэг нь илэрч
байвал:

38°C дээш халуурах,

Чичрэх эсвэл артерийн даралт буурах

болон

Арьсны өвөрмөц бус халдварын үүсгэгч 2
өсгөвөрт эерэг байх (ихэвчлэн 48 цагийн
дотор цуснаас 2 тусгай дээж авдаг)

43

Эмнэлгийн эрүүл ахуй (Халдвар хяналт, халдвараас урьдчилан сэргийлэх)

Үндсэн элементүүд:

Байгууллагын бүтэц (ажилчид, үүрэг хариуцлага, албан тасалгаа, техник
төхөөрөмж, интернэт)

Эрүүл ахуйн төлөвлөгөө (бичсэн үйл ажиллагаанууд)

Эмнэлгийн халдвараас урьдчилан сэргийлэх

Тандалт

Дэгдэлтийн менежмент

Аудит

Микробиологийн лаборатори

Антибиотикийн бодлого

Гарын эрүүл ахуй

Тусгаарлах сэрэмжүүлэг

Цэвэрлэх, халдваргүйтгэх, ариутгах

Эмнэлгийн багаж төхөөрөмжийг дахин бэлтгэх үйл явц

Мэргэжлээс шалтгаалах эрүүл мэндийн асуудлууд

Захиргаа аж ахуй болон угаалга

Хог хаягдлын менежмент

Хүнсний эрүүл ахуй

Усны эрүүл ахуй

...

44

Герман дахь Метициллин тэсвэртэй алтлаг стафилококк (MRSA)

Эмнэлэгт эмчүүлж байгаа өвчтнүүдийн - 2-3 %

Асаргаа, сувилгааны газрууд - 2-5 %

Бусад - 25 %

Эмчид үзүүлж байгаа өвчтнүүд - 0.4 1 %

Амбулаторийн өвчтнүүд - 1 %

Эмнэлгээс шалтгаалах Метициллин тэсвэртэй алтлаг стафилококк

Нийгмээс шалтгаалах Метициллин тэсвэртэй алтлаг стафилококк
Мал, амьтнаас шалтгаалах Метициллин тэсвэртэй алтлаг стафилококк

45

Герман дахь Метициллин тэсвэртэй алтлаг стафилококк

Эмнэлэг:

Тусгаарлах

Халаад, бээлий, амны хаалт

Асрах газар:

Катетертай өвчтнүүдийг тусгаарлах...

Хөдөлгөөнтэй өвчтнүүдийг тусгаарлахгүй ба

Амбулаторийн тусламж үйлчилгээ:

Зохицуулалтгүй

Хувийн асаргаа:

Зохицуулалтгүй



Table 1. Characteristics of 103 Participating ICUs, According to the Period of Implementation of the Intervention to Reduce the Rate of Catheter-Related Bloodstream Infections.

Period	No. of ICUs	No. of Catheter-Days per Month	Teaching Hospital %	No. of Beds
		median (interquartile range)		median (interquartile range)
March to May 2004 ^a	40	154 (94–258)	83	404 (268–609)
June to August 2004	35	146 (72–228)	57	336 (218–610)
September to November 2004	17	181 (80–275)	59	299 (190–393)
After November 2004	11	172 (48–279)	73	288 (181–917)

^a Baseline data were not collected by ICUs implementing the study intervention during the baseline (preimplementation) period.

The NEW ENGLAND
JOURNAL of MEDICINE

An Intervention to Decrease Catheter-Related Bloodstream Infections in the ICU

Wong-Riley, M.D., Ph.D., Jack Needleman, M.D., Ph.D., Jean-Benoist, M.D., David S. Glick, M.D., M.P.H.,
Thomas J. Al, M.D., M.P.H., Sara C. Higgins, M.D., Roger S. Taylor, Ph.D., Robert Hays, M.D., Robert M. Hays, M.D.,
Harry R. Hays, M.D., Joseph S. Bower, M.D., John S. Bower, M.D., and Christiana L. Glick, M.D., M.P.H.

Table 3. Rates of Catheter-Related Bloodstream Infection from Baseline (before Implementation of the Study Intervention) to 18 Months of Follow-up.^a

Study Period	No. of ICUs	No. of Bloodstream Infections per 1000 Catheter-Days				
		Overall	Teaching Hospital	Nonteaching Hospital	<200 Beds	≥200 Beds
			median (interquartile range)			
Baseline	55	2.7 (0.6–4.8)	2.7 (1.3–4.7)	2.6 (0–4.9)	2.1 (0–3.0)	2.7 (1.3–4.8)
During implementation	96	1.6 (0–4.4)†	1.7 (0–4.5)	0 (0–3.5)	0 (0–5.8)	1.7 (0–4.3)†
After implementation						
0–3 mo	96	0 (0–3.0)‡	1.3 (0–3.1)†	0 (0–1.6)†	0 (0–2.7)	1.1 (0–3.1)‡
4–6 mo	96	0 (0–2.7)‡	1.1 (0–3.6)†	0 (0–0)‡	0 (0–0)†	0 (0–3.2)‡
7–9 mo	95	0 (0–2.1)‡	0.8 (0–2.4)‡	0 (0–0)‡	0 (0–0)†	0 (0–2.2)‡
10–12 mo	90	0 (0–1.9)‡	0 (0–2.3)‡	0 (0–1.5)‡	0 (0–0)†	0.2 (0–2.3)‡
13–15 mo	85	0 (0–1.6)‡	0 (0–2.2)‡	0 (0–0)‡	0 (0–0)†	0 (0–2.0)‡
16–18 mo	70	0 (0–2.4)‡	0 (0–2.7)‡	0 (0–1.2)†	0 (0–0)†	0 (0–2.6)‡

^a Because the ICUs implemented the study intervention at different times, the total number of ICUs contributing data for each period varies. Of the 103 participating ICUs, 48 did not contribute baseline data. P values were calculated by the two-sample Wilcoxon rank-sum test.

† P≤0.05 for the comparison with the baseline (preimplementation) period.

‡ P≤0.002 for the comparison with the baseline (preimplementation) period.

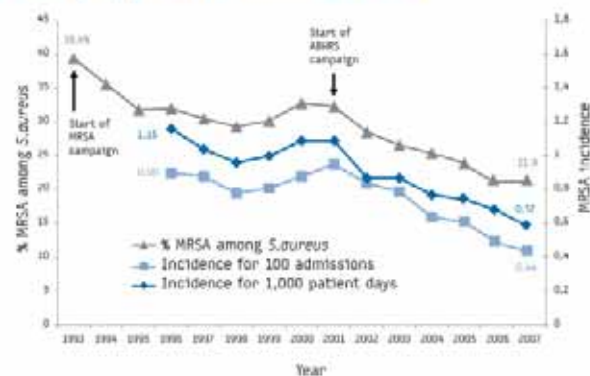
The NEW ENGLAND
JOURNAL of MEDICINE

An Intervention to Decrease Catheter-Related Bloodstream Infections in the ICU

Wong-Riley, M.D., Ph.D., Jack Needleman, M.D., Ph.D., Jean-Benoist, M.D., David S. Glick, M.D., M.P.H.,
Thomas J. Al, M.D., M.P.H., Sara C. Higgins, M.D., Roger S. Taylor, Ph.D., Robert Hays, M.D., Robert M. Hays, M.D.,
Harry R. Hays, M.D., Joseph S. Bower, M.D., John S. Bower, M.D., and Christiana L. Glick, M.D., M.P.H.

FIGURE 3

MRSA proportion among *S. aureus*, and MRSA incidence, 39 teaching hospitals of the Paris area, 1993 to 2007



Source: Assistance publique - Hôpitaux de Paris
MRSA: methicillin-resistant *S. aureus*. ABHR: alcohol-based hand rub solutions.

National Trends in the Incidence of Surgical Site Infection

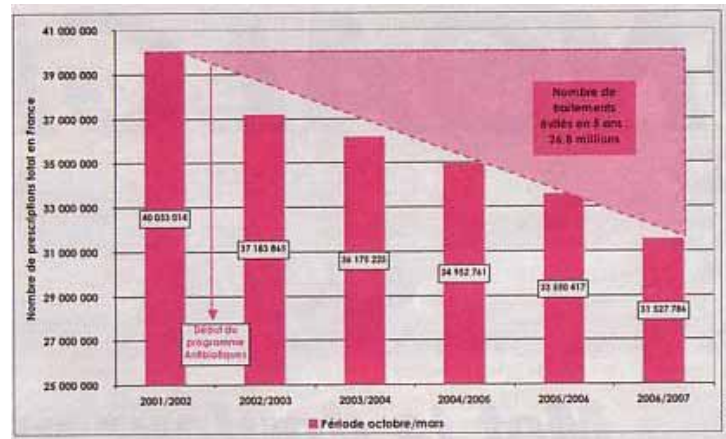
TABLE 3. Annual Overall and Risk-Adjusted Incidence Rate for Surgical Site Infection for Major Surgical Procedures in France, 1999–2005

Variable	Year							Relative % difference in incidence, 1999–2005	P ^a
	1999	2000	2001	2002	2003	2004	2005		
No. of procedures surveyed	79,803	82,348	109,149	114,579	107,576	126,451	150,006	...	...
Overall incidence	2.0	1.8	1.7	1.5	1.5	1.6	1.4	31	<.001
Incidence for NNIS risk class 0	1.1	0.9	0.9	0.8	0.9	0.9	0.8	29	<.001

NOTE. Incidence data for each year are the no. of infections per 100 patients who underwent surgery, adapted from the Réseau d'alerte, d'investigation et de surveillance des infections nosocomiales (RAISIN) results.¹⁵ RAISIN combines data from the 5 interregional surveillance networks, which use common definitions and surveillance methods, into a single national database. NNIS, National Nosocomial Infections Surveillance System.

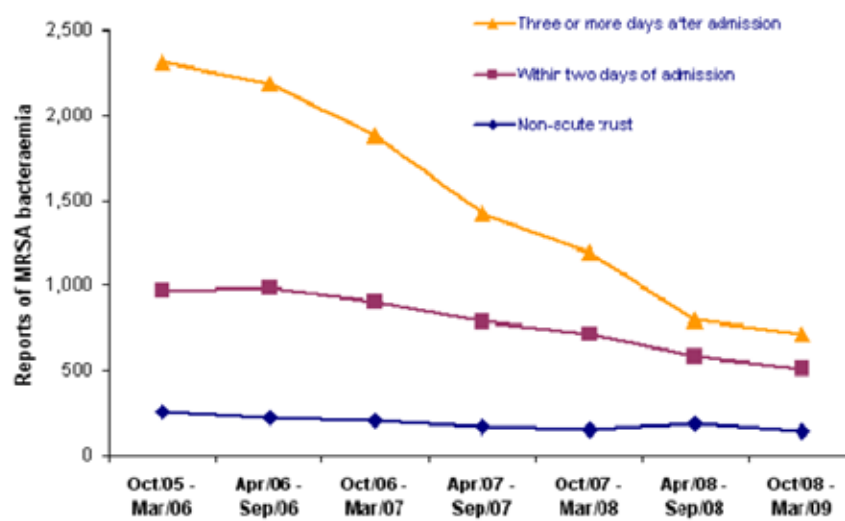
^a By χ^2 test for linear trend.

TOTAL ANTIBIOTIC COMSUMPTION in FRANCE



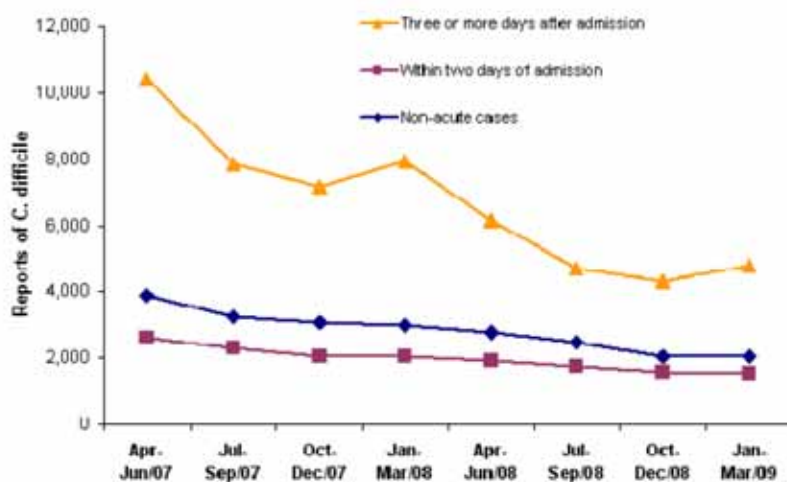
51

Figure 1. MRSA bacteraemia, by patient presentation, since October 2005



52

Figure 2. *Clostridium difficile*, by patient presentation (all patients aged 2 years and over), since October 2005



53

Европын улс орнуудын дахь MRSA: „... өнгөрсөн 5 жилийн хугацаанд ойролцоогоор 13 % иар буурсан байна.

“Үндэсний Эрүүл мэндийн үйлчилгээ үзүүлдэг эмнэлгүүдэд хийсэн судалгаагаар Англи улсад статрегитэй мэс засалууд хийх, гарын эрүүл ахуйг дэмжих, тусгаарлалтыг бодлоготойгоор хийсний үр дүнд MRSA –ийн халдварын тохиолдол багассан байна. Түүнчлэн эрчимт эмчилгээний институтэд өвчтнүүдийн тусгаарлах нэг ортой өрөөнүүд хүрэлцээгүй байгаагаас MRSA –гийн тархалт ихсэж багсах нь гарын эрүүл ахуйд алкологид суурилсан бүтээгдэхүүнийг хэрэглэхтэй холбоотой болохыг Пан Европын судалгаа харууллаа.”

Struelens and Monnet, Infect Control Hosp Epidemiol 2010, 31, suppl 1, S42

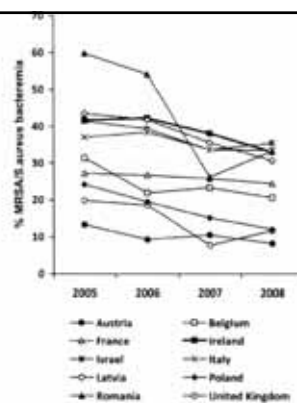


FIGURE 1. Trends of decreases in the percentage of *S. aureus* bacteremia cases caused by methicillin-resistant *S. aureus* (MRSA) in 10 countries reporting to the European Antibiotic Resistance Surveillance System, 2005–2008. Adapted with permission from the European Antimicrobial Resistance Surveillance System 2008 annual report.¹

54

Баярлалаа.