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Eurosurveillance, Volume 8, Issue 38, 16 September 2004

Articles

Citation style for this article: MRSA cases continue to increase in Finland. Euro Surveill. 2004;8(38):pii=2551. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=2551>

MRSA cases continue to increase in Finland

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A marked rise in methicillin-resistant *Staphylococcus aureus* (MRSA) isolates has been detected between 2003 and 2004 in Finland. There has also been an increase in the number of MRSA bloodstream infections. A total of 849 MRSA isolates have so far (from 1 January to 10 September 2004) been notified to the Finnish National Infectious Disease Register (NIDR) in 2004 (78-148 per month). This is already more than the total number of MRSA isolates detected during the whole of 2003.

Numbers of reports of MRSA in 2004 have been highest in three hospital districts: Helsinki and Uusimaa (southern Finland): 387, Pirkanmaa (central Finland): 177 and Pohjois-Pohjanmaa (northern Finland): 52.

Alarmingly, there have been 18 cases of MRSA bacteraemia so far in 2004, 2.5% of all bloodstream *S. aureus* infections. Half of these were in the Helsinki and Uusimaa hospital district, which covers the largest population (1.7 million inhabitants). Between 1995-2003, the annual number of cases of MRSA bacteraemia ranged from 0 to 8, and the proportion of methicillin resistance among invasive *S. aureus* isolates was under 1% (Table).

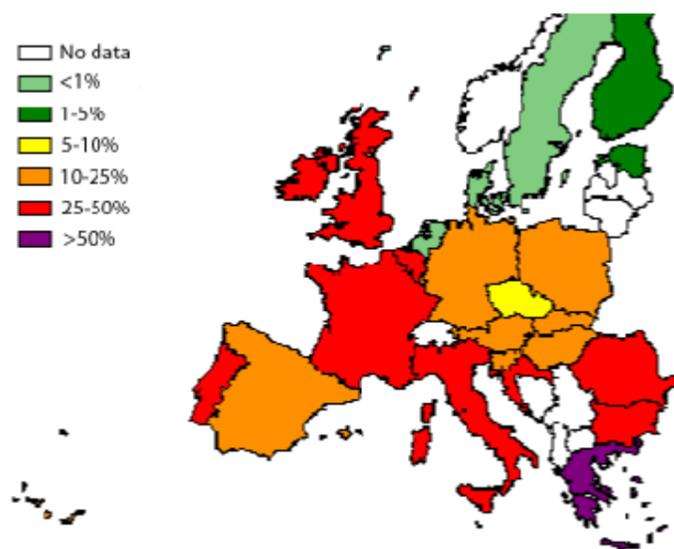
Table. All notified MRSA cases and the proportion of MRSA among *S. aureus* blood isolates, Finland, 1995-10.9.2004. Source: National Infectious Diseases Register (NIDR)

Year	All MRSA isolates	MRSA blood culture isolates (x)	<i>S. aureus</i> blood culture isolates (y)	Methicillin resistance among <i>S. aureus</i> infections (x/y; %)
1995	89	2	627	0.3
1996	108	0	667	0
1997	120	4	746	0.5
1998	189	5	717	0.7
1999	211	8	812	1
2000	261	4	849	0.5
2001	344	4	887	0.5
2002	597	8	984	0.8
2003	813	5	975	0.5
1.1.- 10.9.2004	849	18	709	2.5

This development has already been reported by the European Antimicrobial Resistance Surveillance System (EARSS), and Finland has recently been reclassified from a country with <1% methicillin resistance in invasive *S. aureus* infections to 1-5% on the European resistance map (Figure). It should be noted that only 15 of the 28 Finnish clinical laboratories participate in EARSS, whereas all report to the NIDR.

Figure. Proportion of MRSA among invasive *S. aureus* isolates, Europe, 2003. Source: European antibiotic resistance surveillance system (EARSS, http://www.earss.rivm.nl/PAGINA/interwebsite/home_earss.html)





Data from hospitals taking part in the Finnish Hospital Infection Program between 1999-2003 identified *S. aureus* as the second most common microbe causing healthcare-associated bloodstream infections (11%) and surgical site infections (SSI) (18%), but incidence of methicillin resistance was low. During these years, the proportion of MRSA among healthcare-associated *S. aureus* bloodstream infections averaged 1% and among SSIs, 3%.

National guidelines for the control of MRSA were recently updated and published in August. It is available on the Kansanterveyslaitos website in Finnish and will soon be available in Swedish, too. (<http://www.ktl.fi/attachments/suomi/osastot/infe/julkaisut/mrsa2004.pdf>). The updated guidelines are in line with those published in other Nordic countries and the Netherlands. They are now more detailed and target infection control teams in hospitals and other healthcare facilities (such as nursing homes) where implementation of local infection control measures against the spread of MRSA is being planned.

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