

Additional file 1

Identification and susceptibility testing of *S.aureus* isolates

Setting

During the study period a reform of local government merged four counties into two health regions: Central Denmark Region and North Denmark Region, collectively referred to as Northern Denmark. Three departments of clinical microbiology served Central Denmark Region and were situated in Aarhus (Aarhus University Hospital), Viborg (Regional Hospital of Viborg) and Herning (Regional Hospital West Jutland). North Denmark Region was served by one department of clinical microbiology at Aalborg University Hospital, Aalborg.

The total number of beds in non-psychiatric wards was 5.528 in 2000 and 4.058 in 2011.

Number of hospitals in the two health regions and their predecessors		
	2000	2011
Central Denmark Region	17	5
North Denmark Region	7	4

Blood cultures

Blood cultures were ordered by the attending physician and blood samples were drawn by trained biotechnicians. The BacT/Alert system (bioMérieux, Marcy l'Etoile, France) was used throughout the study period at all hospital sites. Recommendations differed between the two health regions: In Central Denmark Region a standard blood culture for adults comprised two sets with two bottles each (one aerobic and one anaerobic bottle), whereas the standard in North Denmark Region was one set with three bottles (two aerobic and one anaerobic bottle).

Identification and susceptibility testing of *Staphylococcus aureus*

S. aureus was identified by horse plasma tube coagulase test or an equivalent commercial latex agglutination test. All blood culture isolates were referred to the Staphylococcal Reference Laboratory at Statens Serum Institut (Copenhagen) for national surveillance which included phage typing up to 2006 and *spa*-typing thereafter (1,2).

Susceptibility testing was undertaken locally by disk diffusion and confirmatory testing was performed at Statens Serum Institut (3-5). Screening for methicillin resistance varied between departments 2000-2002, but in 2003 the cefoxitin disk diffusion test was implemented both locally and at Statens Serum Institut (4,5). Detection of the *mecA* gene cassette was done by either in-house polymerase chain reaction (PCR) or the EVIGENE™ hybridization test (2,7).

Methicillin-resistant *S. aureus* (MRSA) became notifiable in Denmark in 2006. Due to the low prevalence of methicillin-resistance extra precautions were taken in this study by cross-referencing local data with the Danish national *S. aureus* bacteremia database at Statens Serum Institut.

References

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