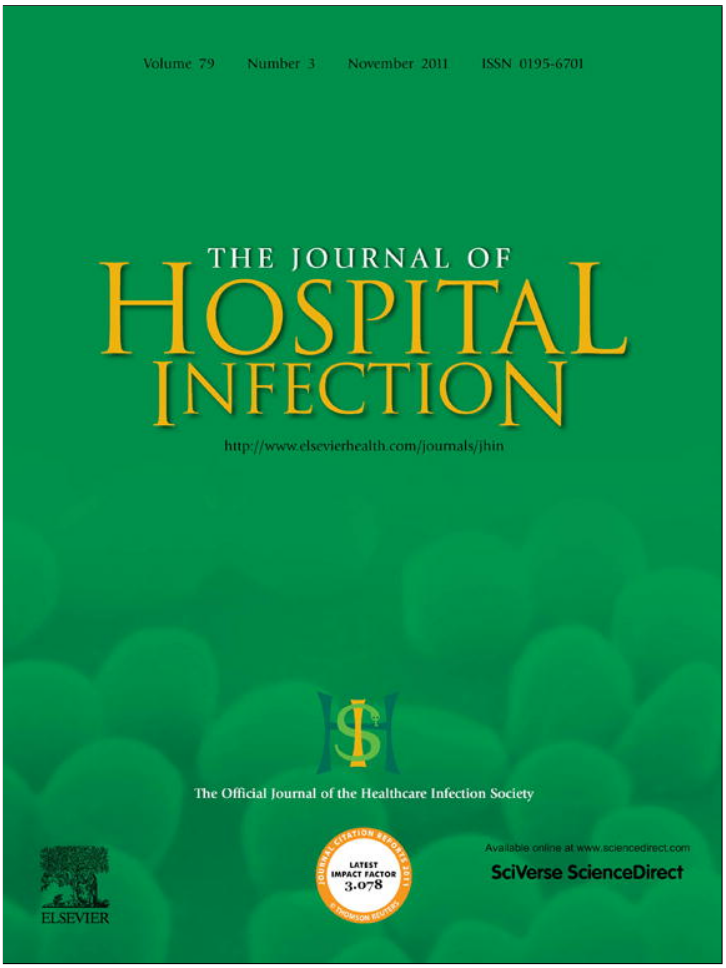

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Letters to the Editor

First report of community-acquired meticillin-resistant *Staphylococcus aureus* from a Slovenian hospital

Madam,

Community-acquired meticillin-resistant *Staphylococcus aureus* (CA-MRSA) is responsible for a broad range of infections. Skin and soft tissue infections are common, while severe and life-threatening infections such as necrotizing pneumonia, necrotizing fasciitis and severe sepsis are less common.[1,2] Little is known about the occurrence of CA-MRSA strains in Slovenia. In 2005, Müller-Premru *et al.* reported Panton-Valentine leukocidin (PVL)-positive CA-MRSA strains among football players.[3] The same year, Grmek Kosnik *et al.* reported the occurrence of CA-MRSA strains in the home environment.[4] However, until recently, there had been no confirmed cases of CA-MRSA in a hospital environment in Slovenia.

Between May 2003 and June 2004, there was an outbreak of four cases of skin and soft tissue infections due to CA-MRSA strains in a hospital in Slovenia. Clinical data from all four cases were reviewed. In May 2003, two women (P1, P2) presented with necrotizing soft tissue infection, abscesses and fever. Epidemiological investigations showed that they underwent surgery on the same day. In March and June 2004, MRSA strains were recovered from epidural catheters in a further two patients (P3, P4). The average age of these four patients was 49.5 years. In three female patients, the symptoms of infection occurred two to eight days following surgery. One patient developed a serious infection (meningitis).

The four strains of MRSA caught our attention because of the non-distinctive phenotypic characteristics. The susceptibility of these strains differed from the endemic hospital-acquired MRSA strains in Slovenia, which are generally resistant to β-lactam antibiotics, fluoroquinolones, macrolides, lincosamides and aminoglycosides. These four MRSA strains had an identical resistance phenotype and were resistant to β-lactam antibiotics, kanamycin, tetracycline and fusidic acid, but susceptible to fluoroquinolones.

When the MRSA strains were confirmed, the possible sources of infection were investigated. Surveillance samples (pharyngeal, nasal and axillary swabs) were taken from the surgeon, anaesthetist and anaesthesia technician. However, the source of MRSA was not found and all surveillance samples were negative. The results implied that MRSA could have been transmitted from P1 to P2 through the hands of the personnel, or by contaminated medical equipment and instruments during surgery. This hypothesis could not be confirmed or refuted because the hospital did not perform screening tests for MRSA. In 2004, MRSA was isolated from the tips of epidural catheters in P3 and P4. Both patients were probably colonized with MRSA during epidural anaesthesia, but this hypothesis could not be confirmed or refuted. The tip of the epidural catheter in P3 was routinely removed two days following surgery. This is why we assumed that the tip of the epidural catheter from P3 was only colonized with MRSA. P4 had the epidural catheter *in situ* for eight days. During this time, her temperature increased, she had paresthesia in her feet, a stiff neck and abnormal neurological findings. Meningitis and degenerative changes in the spine were diagnosed. Epidemiological investigations and review of the medical records of all four patients showed that the same anaesthesiologist was present for all four operations.

All four strains had the same phenotypic and molecular characteristics. All MRSA isolates contained SCC*mec* type IV and belonged to *agr* type III. Genes for PVL and β-haemolysin were detected in all isolates. They belonged to genotype ST80-SCC*mec* IV (European clone).

In conclusion, CA-MRSA strains are present in both community and hospital environments in Slovenia, so molecular epidemiological surveillance is imperative.

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Conflict of interest statement
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Funding sources
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Results from a community MRSA decolonization pilot scheme in North East Essex

Madam,

We read the letter from Randle and Bellamy with interest.[1] Since August 2009, we have commissioned a small community-based team to attempt decolonization of patients newly diagnosed as meticillin-resistant *Staphylococcus aureus* (MRSA) carriers. These patients have been identified following the taking of clinical specimens or following screening on admission to hospital. Both general practitioners and hospital doctors can refer patients to the team, who use the standard UK decontamination regimen of mupirocin and chlorhexidene.

From August 2009 to June 2010, 208 patients were decolonized using the standard protocol. One hundred and thirty-two were MRSA negative after the first treatment, a further 30 were negative after the second round of treatment, and another 24 tested negative after three rounds of treatment; an overall success rate of 89.4%.

Sixty-one patients were rescreened after six months, and 73.8% remained MRSA negative.

Figure 1 shows the number of new isolates in our health economy (identified from the local pathology computer system) since January 2008. The overall number of new isolates has decreased during a period when screening has increased due to a change from a risk-based approach to a universal approach for hospital admissions during 2010. It is not possible to ascribe this reduction to a causal effect of the decolonization team's contribution, but we are sufficiently encouraged that the team has been funded to continue to provide the decolonization service and collect more data.

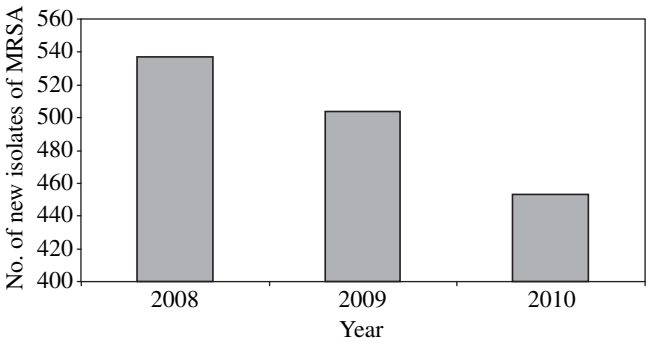

Figure 1. New isolates of meticillin-resistant *Staphylococcus aureus* (MRSA) for North East Essex.

Conflict of interest statement
None declared.

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Reference

1. Randle J, Bellamy E. Post-discharge follow-up of meticillin-resistant *Staphylococcus aureus* patients. *J Hosp Infect* 2011;**78**:72–73.

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Is pre-emptive strict isolation of patients at high risk of colonization with MRSA still required in low-prevalence countries?

Madam,

Strategies to prevent the spread of meticillin-resistant *Staphylococcus aureus* (MRSA) differ between countries. In The Netherlands and Scandinavia, where the prevalence of MRSA has remained low, strict infection control measures have been in place since the 1980s. This is known as the 'search and destroy' policy, but it has not been introduced in other neighbouring countries.[1–4] The prevalence of MRSA also differs geographically, representing 21% of patients with *S. aureus* bacteraemia (2008) in Belgium, 19% (2008) in Germany and <1% (2008) in The Netherlands. Regional differences in prevalence have also been documented internally within The Netherlands. The highest prevalence was reported in Limburg, a province with foreign borders (23.9 out of 100,000 inhabitants in 2010). In contrast, the lowest prevalence was reported in Friesland, a province without foreign borders (9.3 out of 100,000 inhabitants in 2010; Dr J. de Neeling, personal communication). Increasingly, healthcare is a Europe-wide market, with cross-border competition for the provision of care. Increased cross-border healthcare and other travel may increase the risk of introducing MRSA into Dutch hospitals close to international borders. The question arises whether the MRSA search and destroy policy is sustainable in hospitals located in areas of low prevalence of MRSA, but in close proximity to borders of countries with much higher prevalence.

We report our experience, in a hospital near the Belgian and German borders, of non-use of pre-emptive strict isolation of patients at high risk of MRSA, as recommended by the Dutch